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THE UNIVERSITY OF ALBERTA

A STRATEGY FOR DEVELOPING A HOSPITAL NURSING ORIENTATION PROGRAM

by

Ⓒ CYRENE AUDREY CONRAD

A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH
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ABSTRACT

Traditional orientation programs are failing to meet the learning needs of newly hired nurses in the hospital setting. Specific criticism of these programs has focused on the lack of documentation of the individual learning needs of nurses and lack of attention to adult learning principles during the orientation process.

The purpose of this study was to develop a plan for selecting and assessing program alternatives for addressing the problem of providing an effective orientation program for nurses newly hired to work on medical/surgical units at the University of Alberta Hospitals. The specific objectives of the study were to:

a. develop an instrument which could be used to determine the basic manual nursing skills necessary for nurses to function on medical/surgical units,

b. identify, by using this instrument, the self-assessed learning needs of newly employed nurses, and

c. propose a strategy for developing a more effective orientation program for newly employed nurses based on these identified needs and on the findings from the literature.

In keeping with the problem solving model for planning change, information was collected and analyzed which led to a diagnosis of the problem. The gathering of data was done in two phases.

In phase one an instrument was developed which was used to determine the manual nursing skills required on the medical/surgical units. This instrument was based on the RNABC's document Essential Manual Skills of a New Graduate. The skills contained in this document

were modified and then validated by nurses working on the medical/surgical units. The Required Competency Profile thus developed contained the skills and the performance level identified by practicing experts as essential for nurses working on medical/surgical units.

In phase two the Competency Analysis Profile, developed from the Required Comoetency Profile, was used to identify the self-diagnosed learning needs of nurses. One hundred newly employed nurses were asked to complete the CAP by indicating those skills which they could perform at the required level.

When the self-diagnosed performance of the nurses was measured against the required skills it was found that the respondents, regardless of years of nursing experience or type of preservice preparation, were deficient in all of the ten competency areas. There was also a wide variation in the type of skills and the number of skills which respondents reported that they were unable to perform. These findings suggested that the type of orientation program needed was one which could accommodate the individual learning needs of newly employed nurses.

Following the diagnosis of the problem, a number of possible solutions were identified. These were Nursing Internship Programs, Special Orientation Units and Clinical Preceptorship Programs. There were two criteria on which these alternatives were based. One was the concept of self-assessed learning needs and the other was the individualization of learning experiences based on identified needs. These criteria were derived from the findings of the study and from a review of the literature.

The alternatives were then examined in terms of their benefits, practicability and diffusibility vis-a-vis the specific hospital situation. Based on the analysis of the alternatives and in consultation

with selected nursing supervisors, the Clinical Preceptorship Program was selected as the orientation program most likely to be effective at the University of Alberta Hospitals.

It was recommended that the University of Alberta Hospitals develop competency profiles for basic manual nursing skills, starting on the medical/surgical areas and then extending the process to all units in the institution. It was further suggested that the profiles might include other competency areas in which nurses must be proficient.

Cardiopulmonary resuscitation, initiating and maintaining intravenous infusions, and using fire extinguishers were three specific skills which a large number of the respondents were unable to perform as required. It was recommended that all newly employed nurses participate in certification programs for the first two skills, and participate in initial and ongoing practice sessions in relation to the use of fire extinguishers.

The Clinical Preceptorship Program was recommended as a strategy for meeting the learning needs of newly employed nurses. It was suggested that the program be initially introduced on selected units, and that attention be given to items such as training of preceptors and methods of evaluating the various components of the program.

Since the self-diagnosis engaged in by the respondents was in fact a matter of perception, it was recommended that further study be done to validate the perceptions of newly employed nurses in relation to their abilities to perform the required manual skills.

In addition to the above institution-specific recommendations, it was also suggested that:

1. Faculties of Nursing strengthen the skills preparation of their students so that new graduates are able to function at a basic

level of competence. Faculties who have or are considering shortening their nursing programs must ensure that their students still have the sufficient opportunity to learn the basic manual nursing skills.

2. Faculties of Nursing seek input from nursing practice experts in hospitals regarding the skill requirements of these employing agencies.
3. Collaboration between nursing education and nursing practice continue in order that strategies can be identified for reducing the education-practice gap.
4. The Alberta Association of Registered Nurses encourage hospitals throughout the province to identify the basic skills required by nurses working in these institutions, and further, that the Association become involved in the coordination of these identification procedures in order to compile a document such as Essential Manual Skills of the New Graduate developed by the Registered Nurses Association of British Columbia.
5. The Alberta Association of Registered Nurses encourage and collaborate with nursing educators in utilizing the document so developed to ensure that all new graduates can function at a beginning level of competence relative to the skills contained in the document.
6. Faculties of Nursing encourage students to work in hospital settings whenever possible, in order to gain additional clinical experience.
7. Faculties of Nursing recognize that nursing indeed is a clinically based profession and the ability to perform manual skills while caring for patients is mandatory for safe and effective patient care.

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CHAPTER 1

OVERVIEW OF THE STUDY

Introduction

The key institutions in today's health care industry, hospitals, are highly labour intensive. The major component of their budgets is their large labour force. Given the variety of services offered and the increasing complexity of tasks needed to provide these services, it is of benefit to hospitals to develop effective orientation programs for their staff.

Current literature on human resources suggests that a well designed orientation program contributes to employee job satisfaction, promotes a positive attitude of the employee toward the organization, and is essential to the smooth functioning and productivity of the organization (McCool, 1977; Bedwell, 1978).

The provision of orientation programs for new nurse employees has long been an accepted practice in most hospitals. In the past two decades, however, an increasing amount of attention has been directed toward these programs as a result of the changing focus of nursing education in general and the increasing number of college prepared nurses in particular. Since the implementation of college nursing programs, a number of evaluative studies have been conducted (Montag, 1966; Forest, 1968; Howard, 1971), the findings of which have revealed that an effective orientation program is one of the most important factors affecting the performance of these graduates.

The need for effective orientation programs is not limited to any one group of nurses. As the Consultant Group for the U.S. Surgeon General noted in 1963:

> In nursing, as in other fields, rapid changes in science and technology require constant education of staff as well as a good orientation of new employees. Such education is needed by all practitioners regardless of the completeness or excellence of the original training. (p. 5)

Most agencies employing nurses recognize the merit of this advice and provide some form of orientation for their newly employed nurses.

While orientation practices of hospitals vary due to philosophy, budget and service needs of each agency, most orientation programs are fairly standardized, with the responsibility being shared by the Inservice Department and the supervisors of the various patient care areas. Orientation programs are usually conducted during the first few days and weeks of the nurse's employment and include information regarding policies, regulations and other operational items which it is presumed the new employee needs in order to function in the specific institution. Frequently performed nursing procedures such as intravenous therapy and cardiopulmonary resuscitation are also included in most orientation programs.

In the past, this standard type of programming was adequate for two reasons. First, the skills and competencies acquired by nurses in their preservice education were congruent with those required by the employing agency. Second, nurses tended to be fairly stable, and inter-city or even inter-hospital movement was an exceptional occurrence. This situation is rapidly changing. Nurses are becoming more mobile; patient care settings and concomitant nursing practices are increasing in complexity; and pre-service nursing programs are focusing on the educational needs of students rather than on the service needs of nursing departments (Morgan, 1978).

Given these factors, it could be argued that the traditional type of orientation described above is no longer effective. The study done by Kramer (1974) does provide evidence to support this argument, and does suggest that nursing departments must establish orientation programs based on documented needs of nurses that have been identified through specific findings. This study is concerned with the documentation of these needs and the selection of a strategy for addressing these needs at the University of Alberta Hospitals.

Need for the Study

The University of Alberta Hospitals has over 1,200 inpatient beds and is the second largest hospital complex in western Canada. As part of a university setting, it not only provides patient care, but is also committed to teaching and research activities, much of which affects the care given to patients. A staff of 4,000, of which nurses comprise one quarter, care for over 28,000 inpatients annually.

One of the functions of the Inservice Education Department at the University of Alberta Hospitals is to provide an orientation program which assists newly employed nurses in fulfilling their roles and responsibilities to the institution. The program is three days in length and covers items such as fire and safety, the organization and policies of the Nursing Division, cardiopulmonary resuscitation and intravenous therapy. Following this general orientation, nurses proceed to their individual wards where unit-specific orientation then becomes the responsibility of each nursing unit supervisor.

Traditionally, all nurses participated in the same activities with no attention given to their individual learning needs or to the skill requirements of the hospital. The situation, however, is changing and the following are some of the factors contributing to the need for a different, more effective approach to the orientation of nurses at the University of Alberta Hospitals.

Size and Complexity of The Hospital

Research findings suggest that the larger the organization the more complex are its functions (Hall, 1977), and at the University of Alberta Hospitals this complexity extends to the many tasks which nurses must perform as they provide care to patients. Nurses employed in this agency work in a dynamic setting with new medical procedures and complex equipment which often changes as medical procedures change. They care for patients with acute conditions requiring substantial amounts of nursing care.

Technological Advances

The rapid expansion of scientific and medical knowledge has accelerated to the point where it is estimated that the half-life of science and technology affecting nursing practice is between three to five years (Tobin, Yoder & Scott, 1974). This means that nurses must continuously learn new skills if they are to continue to provide safe care to patients.

Varying Nursing Backgrounds

Historically, the preparation of nurses occurred in hospitals. In this environment, the performance of technical skills was stressed as the mainstay of nursing practice. The situation has changed, and the performance of technical skills is no longer emphasized to the same degree during the education of nurses. Several factors have tended to lessen the focus on technical skills, including the transfer of most nursing education programs from hospitals to educational settings which has shifted the emphasis of student achievement from the performance of manual skills to "a broad application of cognitive skills" (Sweeney, Regan, O'Malley and Hedstrom, 1980). This changed focus has resulted in an alleged gap between the clinical skills which new graduates possess and those skills required by the hospitals. As one educator notes, "students may graduate without ever having learned or done many of the procedures they would be required to know as staff nurses in a general hospital" (Wolley, 1977).

An increasing number of nurses are returning to the work force after several years of professional inactivity. These individuals may have worked for many years prior to their period of inactivity. With the changes in medical technology and the increasing complexity of nursing care, however, these nurses require a considerable amount of assistance when they return to active practice. Cooper (1973) states that this assistance cannot be provided through a short refresher course.

The recent tightening of the health dollar in other provinces, along with the economic growth in Alberta, has caused an influx of nurses into the province. As well, the immigration of foreign trained nurses has increased. These nurses all have individual learning needs which must be met if they are to function competently in the specific situation.

Despite the fact that the University of Alberta Hospitals is employing a diverse group of nurses from a variety of educational, experiential and cultural backgrounds to work in a complex and changing environment, the same orientation program is given to all newly employed nurses, particularly at the unit level.

In the contemporary health care scene where changes occur rapidly, the need for effective nursing orientation programs is becoming increasingly important. The dynamic developments in medical science and technology and the concomitant changing patterns in the delivery of patient care impede nurses from acquiring, either in the educational programs or through experience, all of the skills required to meet the complex needs of patients in today's society. Hospitals, therefore, have an obligation and a responsibility to patients to ensure that newly employed nurses are competent to perform expected tasks. It is also to their advantage to provide the new employee with the opportunity to learn the situation-specific skills needed to give the required care.

The Importance of Orientation Programs

As early as 1966, the importance of nursing orientation programs was articulated by Montag (1966) who stated that a person who is expected to perform tasks for which she is ill prepared will make mistakes and be dissatisfied. McCloskey (1974) adds further to the notion of dissatisfaction. The findings of her study on staff nurse turnover led her to suggest that nurses who do not receive help to learn the required "job skills" not only experience job dissatisfaction, but also suffer a loss of self esteem. These nurses then resign in order to prevent further loss of their self esteem.

There appears then to be a relationship between job training, job competence, job satisfaction and staff retention. This multifaceted relationship has yet to be recognized in terms of specific monetary support for orientation purposes. Nurses, however, are the largest group of employees in hospitals (Moore, Gatt and Storch, 1980) and account for the major portion of their personnel costs. As well, it has been estimated that up to 11 million dollars were spent in one year on the orientation of nurses in Alberta. This being so, it is critical that hospitals ensure that orientation programs are not only in place, but that these programs are relevant and useful to the individual as well as to the employing agency. The relevance of these programs can be assessed only if they are based on documented learning needs that have been identified through specific findings.

While an effective orientation program is just one of the many factors affecting the retention of nurses, it is a critical component of the effective operation of a hospital and demands a greater commitment, financially and in terms of its adequacy, if the immediate and future needs of patients, nurses and hospitals are to be met.

Statement of the Problem

Nursing practice involves many tasks, each with their requisite skills. The performance of basic physical care and concomitant procedures and techniques is just one aspect of nursing care, but if the associated manual skills are lacking, effective performance in other areas of nursing practice is jeopardized. In order to assist newly employed nurses at the University of Alberta Hospitals to function effectively in the staff nurse role, it is necessary to provide them with some type of skill preparation program. The difficulty has been that the skills required in the specific situation have not been systematically identified. Consequently, the orientation of newly employed nurses at the University of Alberta Hospitals relative to their acquisition of the required manual nursing skills has not been as effective as it should be.

The questions which need to be answered then are: what skills do newly employed nurses need to know; and, what is the most effective way of providing them with the opportunity to learn these skills? To ensure the development of a pertinent orientation progam, the basic manual skills required by nurses to function on medical/surgical units at the University of Alberta Hospitals must be determined. As well, the abilities of newly employed nurses to perform these required skills need to be identified.

Purpose of the Study

The purpose of this study was to develop a plan for selecting and assessing program alternatives for addressing the problem of providing an effective orientation program for nurses newly hired to work on medical/surgical units at the University of Alberta Hospitals. The specific objectives were to:

1. develop an instrument which could be used to identify the basic manual nursing skills necessary for nurses to function on medical/surgical units,

2. identify, by using this instrument, the self-assessed learning needs of newly employed nurses, and
3. propose a strategy for developing a more effective orientation program for newly employed nurses based on these identified needs and on the findings from the literature.

Significance of the Study

It is anticipated that these findings will contribute significantly to the further development of effective orientation programs for nurses employed to work on the medical/surgical units at the University of Alberta Hospitals. It is hoped that the findings will be useful to the Nursing Division and assist it to:

1. Review on an ongoing basis, the various patient care procedures performed by nurses working on medical/surgical areas in order to determine those manual skills which are essential and required.
2. Develop a variety of learning strategies and approaches which are geared to the individual's needs, and which will facilitate the mastery of the required skills in as short a time as possible.
3. Identify for nursing educators those skills which have been determined by experts in nursing practice as basic and essential for nurses working on medical/surgical units, and to collaborate with nursing educators and the professional organization in developing an ongoing mechanism for ensuring that such skills are included in standards of basic nursing competency.

4. Develop a tool for assessing on an ongoing basis, the clinical nursing skills required on all patient care areas.
5. Determine specific costs involved in the provision of nursing orientation programs at the University of Alberta Hospitals.
6. Demonstrate the importance of effective orientation programs as well as the need for specific funding in order to provide such programs.

Definition of Terms

Nurse:	Any individual who has successfully completed a recognized nursing education program which makes him/her eligible to become a registered nurse in Alberta.
Hospital Diploma Graduate:	Any nurse educated in a hospital based diploma program.
College Diploma Graduate:	Any nurse educated in a college based diploma program.
Baccalaureate Graduate:	Any nurse educated in a university based program.
Newly Employed Nurse:	Any graduate or registered nurse who has been employed at the University of Alberta Hospitals for one week or less.
Basic Manual Nursing Skills:	Nursing activities of a technical nature which nurses perform frequently when providing care to patients on medical/surgical units at the University of Alberta Hospitals.
Required Competency Profile (RCP):	The instrument used to elicit responses from medical/surgical nurses in relation to the basic manual skills required on these units at the University of Alberta Hospitals.

Competency Analysis Profile (CAP):	The instrument consisting of the required basic manual nursing skills, validated from the RCP, and used to identify the learning needs of newly employed nurses at the University of Alberta Hospitals.
Required Basic Manual Nursing Skills:	Those basic manual nursing skills which all newly employed nurses working on medical/surgical units at the University of Alberta Hospitals must be able to perform.
Required Level of Competence:	The level at which all newly employed nurses working on medical/surgical units at the University of Alberta Hospitals must perform the required basic manual nursing skills.
Self-Diagnosed Learning Needs:	Those basic manual nursing skills which have been determined as being basic and essential and which newly employed nurses working on medical/surgical areas at the University of Alberta Hospitals have identified that they cannot perform at the required level.
Orientation Program:	Unit based orientation which provides the newly employed nurse with the opportunity to learn the required manual skills.

THE SCOPE OF THE STUDY

Delimitations

While it is recognized that the performance of manual skills is only one aspect of nursing practice, manual-technical skills only are referred to in this study, and for the following reasons:

1. The performance of manual-technical skills is a highly visible behaviour. This visibility makes these skills more readily identified than any other skill area in nursing.

2. Confining the investigation to manual-technical skills makes the study more manageable.

Limitations

This study was conducted in one institution only. Therefore, the findings and conclusions of the study relate specifically to that agency. Generalizations to other hospital situations may not necessarily be applicable.

Assumptions

1. That there are basic manual nursing skills which can be identified.
2. That nurses working on the medical/surgical units at the University of Alberta Hospitals are able to identify the basic manual nursing skills required on these areas.
3. That all skills identified as essential by practice experts are of equal importance in delivering nursing care.
4. That newly employed nurses, as adult learners, are able to identify their learning needs.

Theoretical Framework

Traditional orientation programs such as the one conducted by the University of Alberta Hospitals no longer appear to be effective. The increasing complexity of patient care procedures and the diverse group of nurses employed to provide patient care is creating a need for a different approach to the orientation of nurses. The central issue is: how does one go about developing a more effective program?

Any attempts to make changes in the orientation practices at the University of Alberta Hospitals must be preceded by the posing of certain questions. For example what precisely is the problem? Is there information available to assist in defining the problem? Is there more than one method of orientation? If so, how does one choose the best alternative? Attempts to answer these questions involve a systematic way of examining the orientation situation at the University of Alberta Hospitals. A problem solving process is one way of analyzing the situation and is the framework within which this thesis is developed.

One of the models of planned change described by Havelock (1979) is that of rational problem solving. This process approach emphasizes the solution of problems through adequate analysis as well as the direct involvement of those affected by the solution (Morrish, 1976). As depicted in Figure 1, there are essentially four stages in the problem solving model:

1. Diagnosing the problem.
2. Selecting the solution.
3. Implementing the solution.
4. Stabilizing the change.

This study is dedicated to the first two stages only, but a brief description of the model is given in its totality.

Diagnosing the Problem

The first step in solving a problem is to recognize that a problem exists. This awareness may come from experience, observation and a variety of other sources. Lippitt (1962) calls this stage the clarification of the problem. This involves the collection of data, the analysis and interpretation of which allows one to define the problem or make a diagnosis. The search for information should also include the

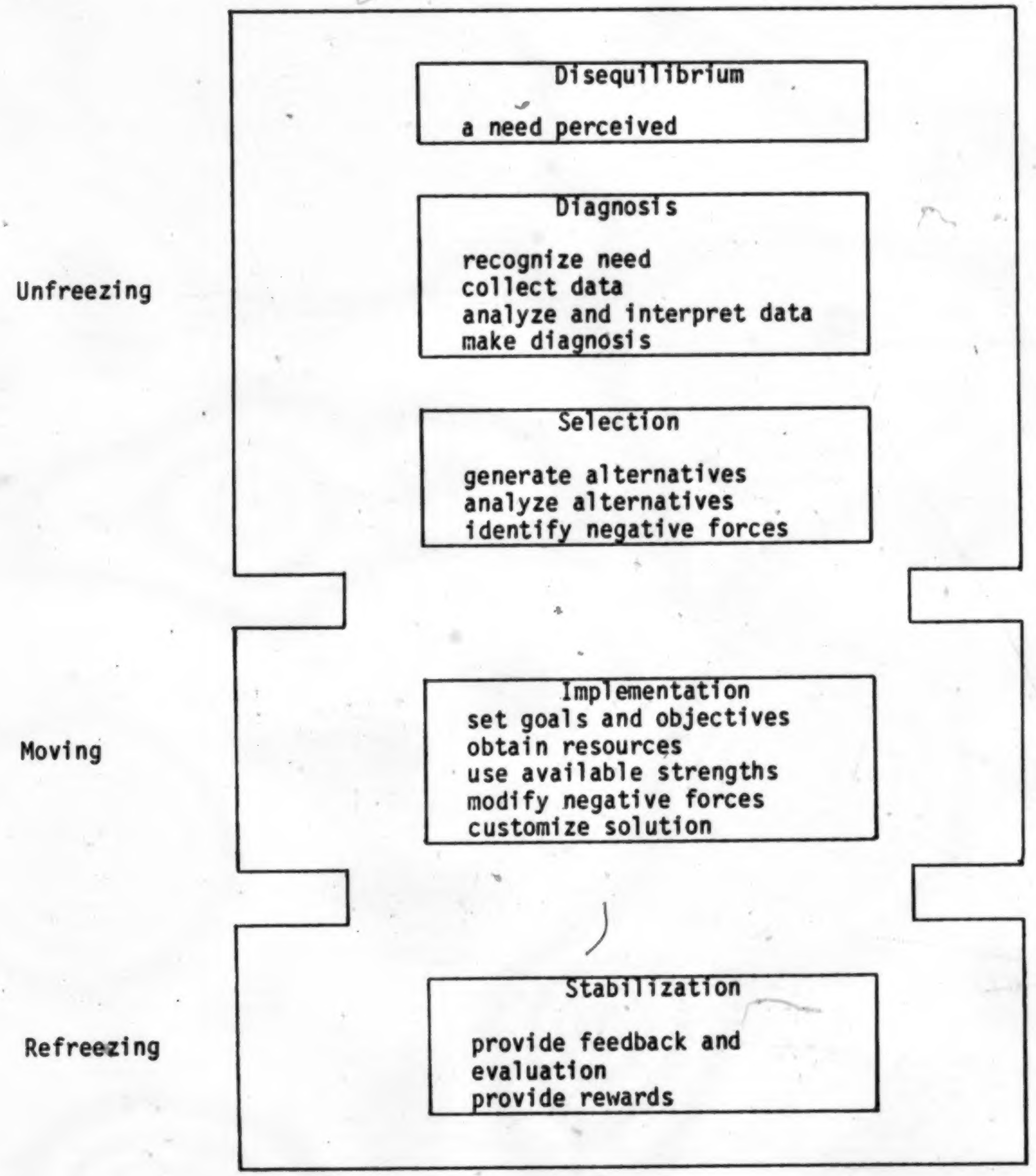
Disequilibrium
a need perceived
Diagnosis
recognize need
collect data
analyze and interpret data
make diagnosis
Unfreezing
Selection
generate alternatives
analyze alternatives
identify negative forces
Implementation
set goals and objectives
obtain resources
use available strengths
modify negative forces
customize solution
Moving
Stabilization
provide feedback and
evaluation
provide rewards
Refreezing

Figure 1: A problem solving model of planned change.

identification of strengths and potential opportunities in the situation which can be used to maximize and enhance the change effort.

Selecting the Solution

Selection of the solution should be based on knowledge of the problem and its causes. Havelock (1979, p. 97) calls this step "choosing", where a number of possible solutions and their respective outcomes are generated. These alternatives need to be examined in light of their benefits, feasibility and diffusibility vis-à-vis the specific situation.

Lewin's force field model (1962) adds further underpinnings to the concept of planned change. According to Lewin's model a system is "unfrozen" when disequilibrium occurs through the identification of a need and the diagnosis of a problem. Included in this process is the determination of the various forces which affect the diffusibility or acceptability of the solution for change. Restraining or negative forces retard the change while driving or positive forces work in favour of the change.

Implementing the Solution

The transformation of the solution into actual change efforts is Lewin's "movement" phase. At this time goals and objectives are determined, needed resources are obtained and negative forces are modified, preferably by their reduction. Any needed adaptation or customization of the solution to the specific situation is done at this point.

Stabilizing the Change

In force fields terms, this stage is called "refreezing". Too often, individuals or organizations revert back to their old ways and the change fades out. Positive feedback and evaluations, and rewards for implementing the solutions are some of the measures suggested for nurturing and maintaining the change until it becomes an integral part of the system (Beckhard & Harris, 1977; Havelock, 1979).

Organization of the Thesis

The study is organized into seven chapters. The first two chapters are comprised of the introduction and the literature review, which focuses on the need for more effective orientation programs. In Chapter 3, the development of the diagnostic instrumentation is outlined. Chapter 4 presents the results of the application of the diagnostic instrumentation and the diagnosis of the problem. Chapter 5 and 6 consist of a discussion of alternative solutions to the problem and an analysis of the alternatives using specific criteria. The final chapter presents the summary, conclusions and recommendations of the study.

Summary

In this chapter, an introduction of the problem to be investigated, the problem statement, purpose of the study, definition of terms and the scope of the study were presented. The framework of the study was described and the organization of the thesis was given.

CHAPTER 2

A NEED PERCEIVED - REVIEW OF SELECTED LITERATURE

One of the fundamental aspects of the problem solving model is the notion that the development of an awareness of a need for change is necessary before any movement from an undesirable to a more desirable situation is possible. The recognition that the present state of affairs is undesirable is the critical first step in the problem solving model, and is the motivating force behind the unfreezing process. The creation of an awareness of a need for change can originate from several sources, one of which is information from the literature.

The intent in this chapter is to demonstrate that there is a need for more effective orientation programs for nurses in the hospital setting. There are two dimensions to this needs identification. The first relates to the skill deficits of individual nurses when they present themselves for employment. The other pertains to the shortcomings of traditional orientation programs.

Skill Deficits of Nurses

A growing concern has been expressed by Directors of Nursing regarding the ability of the new graduate to function as required in the work setting (Alberta Hospital Association, 1978; Rouleau, 1980). In the nursing literature it is suggested that the lack of readiness of the new graduate to function as required is related to the preservice preparation received by nurses (Alberta Association of Registered Nurses Manpower Study, 1980).

Armstrong (1974) states that many new graduates commence work with limited clinical experience. This claim is supported by Hammerstad, Johnson and Land (1977), who note that most new graduates possess a sound theoretical base but experience difficulty in transferring this knowledge to the practice setting. Similar statements are included in the recent study on Nursing Manpower Needs in Alberta (1980) where it is suggested that the emphasis on theory in the nursing programs has resulted in insufficient practical preparation of new graduates. Consequently, nurses are unable to assume staff duties without extensive orientation and on-the-job training.

Much of the censure of the new graduate has focused on the product of the two year college program. For example, Morgan (1978) cites an Ontario hospital, the staff of which expressed dissatisfaction with the performance level of the two year graduate. In this instance the nursing supervisors indicated that in their perception, these nurses needed a period of three to six months before they could function as required. This does not seem to be an isolated perception. Howell (1978) suggests that college prepared nurses appear to function on par with other nurses only after months of general duty experience, and at the recent Nursing Dialogue sponsored by the Alberta Association of Registered Nurses, Rouleau (1980) recommended a one year period of internship for graduates of two year college programs.

It must be noted that these are individual perceptions, not necessarily substantiated by empirical evidence. As Hammerstad et al. (1977) indicate, regardless of the type of preparation, most new graduates experience difficulty in the clinical environment primarily because of the lack of manual-technical skills. The inability of new graduates to perform these skills is problematic for the nurses as well as their employers. As revealed in Schmalenberg and Kramer's (1979) study on role transformation, new graduates perceive manual-technical skills to be an important component of clinical competence, and the authors cite statements made by the students which identify the problems they face in this regard. Students stated that lack of these skills "causes them to lose face with their co-workers, is an embarrassment to them in front of patients and physicians and prevents building self-esteem and self confidence (p. 113)." This situation exists because of inconsistencies between clinical behaviors required in the work setting and those acquired in the educational environment (House, 1975).

The students' statements cited above suggest that there might be a relationship between competence in performing skills and self-esteem. Indeed, it is interesting to note that in Korman's theory of organizational behaviour (1970), he indicates that one of the sources of self-esteem is task specific and relates to one's own perceived competence to perform a certain task. He suggests, too, that high self-esteem is positively correlated with work outcomes. This notion is given support in the literature where it is indicated that the nurse who does not receive help in acquiring the necessary skills not only experiences job dissatisfaction, but also suffers a loss of self-esteem and will resign to prevent this from increasing (McCloskey, 1974; Mumford, 1972; McCool, 1977; Bedwell, 1978).

The concerns expressed in the literature focus on the inadequacies of the new graduate, but there are other groups of nurses who have learning needs as well. In Price's (1967) study to identify the learning needs of nurses, she found that experienced nurses reported their greatest needs related to their insecurity regarding nursing care and new techniques which relate to that care. The results of this study indicate that experienced nurses often have difficulty functioning in clinical situations and that they have learning needs which must be met. This finding is supported by more recent studies. Davis (1972) found that the quality of nursing care declined as years of experience increased. In addition, the Red Deer study (1976) on orientation needs of newly hired nurses revealed that years of nursing experience did not positively affect performance.

It could be speculated that the absence of a positive correlation between years of experience and improved clinical performance is a function of constantly changing technology and an increase in medical knowledge, both of which affect nursing practice. None-the-less, the findings of these studies suggest that years of nursing experience is not necessarily a predictor of clinical expertise and performance. They also suggest that experienced nurses, particularly in new clinical situations, have learning needs and require effective orientation.

Another group of nurses with learning needs is made up of those individuals returning to the work force after several years of professional inactivity. As Cooper and Hornback (1973) note, with the increasing complexity of nursing, these individuals require considerable adjustment on their return to nursing practice. According to Cooper (1973), a short refresher program cannot replace an adequate orientation program or supportive supervision during the early period of employment. Cooper and Hornback (1973) state that studies of nurses who have been employed following completion of refresher courses indicate that many of these nurses work for short periods only. This, they say, can be due to inadequate orientation and supervision in their first position. Indeed, in the recent A.H.A. manpower study (1980), there is the strong suggestion that orientation and initial supervision is one of the factors which inactive nurses consider when deciding whether or not to return to nursing.

Regardless of experience or type of preparation, it appears that all nurses have learning needs and require effective orientation programs which prepare them to function with competence and confidence in today's complex hospital environments.

Shortcomings of Orientation Programs

Orientation is a process by which a new staff member is introduced to a particular work setting (Tobin et al., 1974). Orientation programs are conducted by most organizations and are designed to inform employees of organizational expectations; to deliver information which new employees require before they can function; and to assist new employees in developing a level of competence which makes them more self-reliant and responsible (Planty, McCord & Efferson, 1948; Tobin et al., 1974;

Kruger, 1978). In today's technological society where job competencies must constantly interface with technical and other demands of the work setting, employers are becoming increasingly aware of the importance of the induction process to organizational effectiveness and to the achievement of individual workers (Craig, 1976; Steinmetz, 1976).

From the amount of published information on orientation programs, it would appear that hospitals are aware of the importance and benefits of these programs. Yet, orientation programs for nurses are not as effective as they were conceived to be (Hilliard, 1974; Kramer & Schmalenberg, 1977). The question to be asked then is why are these programs ineffective? There are two aspects to the problem. One relates to the lack of objective documentation regarding the learning needs of nurses during the critical period of orientation. The other pertains to the lack of attention to adult learning principles and their application to the orientation of nurses.

One of the difficulties with traditional orientation programs is the emphasis on organizational policies and hospital activities (Stringham & Smith, 1974). The need for this type of information cannot be denied, but as noted in the literature, these programs have not provided new employees with the opportunity to learn the required skills (Kramer, 1974; Steed, 1978). This is one area in which the lack of documentation is evident. In many instances, there is no clear definition of the desired competencies which experts tell us are necessary for determining the learning needs of nurses (Moran, 1980).

Knowles (1970) suggests a process for identifying learning needs. This process includes the establishment of required performance standards; the development of an employee "inventory" which contains information on the person's skills relative to the job, and the matching of the inventory against the standard. This last activity determines the learning needs of the employee and it is to these documented needs that an orientation program should be addressed.

The other concern related to orientation programs is the lack of attention to nurses as adult learners. One of the principles of adult learning is the concept of the adult as a unique and self-directing personality (Knowles, 1970, pp. 40-44). This means that adults have individual learning needs, and further that adults are able to identify their own learning needs as well as their style(s) of learning (Knowles, 1970; Apps, 1979). As noted by Moran (1980), the unique configuration of learning needs and learning styles of each nurse makes it difficult to fit them into the same program. Yet, this is quite often the approach used in many orientation situations.

The literature indicates that if individuals are confronted by an obtainable goal, they are able to identify their own learning needs and are also able to choose their own methods of learning (Joyce and Weil, 1972). This concept of self-diagnosed learning needs has been developed by Knowles (1970) and applies specifically to adults. Knowles outlines three steps to the process of self-diagnosis:

1. construction of a model of competencies and characteristics to achieve performance,
2. diagnostic experience where learners can assess their level of competency, and
3. measurement of the gaps between acquired competencies and those required by the model. (p. 273)

Another principle of adult learning often disregarded during the orientation of nurses is the timing and sequencing of learning activities. In many situations, all of the activities related to orientation generally occur during the first few days and weeks of employment and every nurse attends all of the sessions (del Bueno, Barber & Christmyer, 1980). The difficulty with this method of organizing orientation programs relates to the readiness of each nurse to learn. Some nurses may experience "overload" if too much information is presented at one time. Other nurses may not be ready to attend to a certain piece of information because their attention is focused on an item which has more relevance and meaning to them at that particular time. As noted in the literature, it is important that orientation activities be appropriately sequenced and timed in order that learning can be maximized.

It is evident from the literature that orientation programs must be provided to all nurses if they are to function effectively in the work setting. It has been shown, however, that many of these programs are unsuccessful because nurses are not provided with the opportunity to learn the skills required in the work setting under conditions which consider their individual learning needs. With the growing concern about the cost of health care, it is important that these programs be relevant to the needs of nurses if the needs of patients are to be effectively met.

Summary

From a problem solving perspective, the search of the literature has been used to heighten awareness that an undesirable situation exists which needs to be changed. The intent in this chapter, then, was to demonstrate that there is a need for more effective nursing orientation programs in hospitals.

There were two aspects to the problem of the need for effective orientation programs. One was the skill deficits of newly employed nurses. It was indicated in the literature that all newly employed nurses, regardless of educational preparation or years of experience, had learning needs and required effective orientation to new work situations. The other dimension to the problem related to the ineffectiveness of orientation programs in meeting the learning needs of newly employed nurses. Some of the shortcomings of the programs identified in the literature pertained to the lack of documentation regarding the specific needs of nurses and to the lack of attention to principles for maximizing the learning of nurses.

As patient care environments become more complex, effective orientation programs for nurses become increasingly important. These programs must be planned and conducted in a way which ensures that nurses are provided with the opportunity to learn the skills needed to provide the desired patient care.

CHAPTER 3

DIAGNOSIS I -
DEVELOPMENT OF THE DIAGNOSTIC INSTRUMENTATION

It Chapter 2, it was shown that traditional orientation programs have been ineffective in assisting newly employed nurses to function as required in today's complex hospital settings. It was also suggested that this situation exists because these programs have not been designed to meet the documented needs of nurses.

Information is said to be the basic nutrient of any valid change. Consequently, if an effective change is to be made in the orientation practices at the University of Alberta Hospitals, data are needed regarding the skill requirements on medical/surgical units against which the self-diagnosed skill performance of newly employed nurses can be measured. The discrepancies identified between the skills which nurses can perform and those which they must be able to perform can provide direction regarding the development of an effective orientation strategy.

To accomplish the task of developing a strategy for a more effective orientation program, the diagnostic stage was divided into two phases, the determination of skill requirements and the identification of learning needs derived from the self diagnosis of newly employed nurses. The first phase will be reported in this Chapter; the second, in Chapter 4.

Determination of Skill Requirements

Instrument Construction

The intent in this Chapter is to describe the process by which the basic manual skills required by nurses working on medical/surgical areas at the University of Alberta Hospitals were determined. This was achieved by developing a profile of nursing skills which was then reviewed by a group of nursing experts at the University of Alberta Hospitals. The profile was adapted from the Registered Nurses Association of British Columbia's (R.N.A.B.C.) document Essential Manual Skills for a New Graduate (1978). The original profile was an inventory of 149 skill statements, classified into 10 competency areas. Fifteen items not applicable to medical/surgical units at the University of Alberta Hospitals were eliminated (see Appendix A). The profile thus developed (see Appendix B) was an inventory of 134 basic manual nursing skills. Procedural specifications were listed beside each skill. The profile allowed each skill to be rated as Essential or Non-Essential, and ranked on a 4 point scale as to the level of performance required. The performance levels were derived from the R.N.A.B.C.'s document and are as follows:

1. Can perform this skill satisfactorily without supervision or assistance with more than acceptable speed and quality of work.
2. Can perform this skill satisfactorily without supervision and/or assistance.
3. Can perform this skill satisfactorily but requires periodic supervision and/or assistance.

4. Can perform this skill but requires constant supervision and some assistance.

Modification and refinement of the profile was achieved with the help of the inservice instructors who reviewed the profile and provided feedback on skill statements, specifications and performance levels. Based on the instructors' comments (see Appendix C), the following changes were made:

1. items were regrouped to provide a more organized format,
2. specifications common to all skills were listed separately as General Procedural Specifications,
3. the four point scale was changed to a three point scale, and
4. one skill was added to the profile.

Validity and Reliability of the Instrument

The Required Competency Profile (R.C.P.) described above was adapted from the instrument developed and validated by the R.N.A.B.C.. Modification of the original instrument was based on informed judgement, resulting therefore in a list of skills acceptable at the manifest level of validity. Writers in the area of research design and statistical measurement indicate that validity of an instrument can be increased by acquiring the judgement of experts. Furthermore, these writers suggest that content validity can be established by obtaining at least a 70% agreement among experts (Ebel, 1965; Thorndike & Hagen, 1969; Forcese & Richer, 1973; Hazlett, 1975).

A group of nurses working on medical/surgical units was used to establish content validity of the profile. Those skills identified as essential by 70% of these nurses were retained in the R.C.P. Therefore, the criterion used to determine essential skills was 70% agreement among practicing nurses.

Reliability of the instrument was established by using the Guttman split-half reliability test (Forcese & Richer; 1973). When the responses of the validators were divided into two groups (odd-even groups), a reliability rating of 0.92 was obtained between the two sets of responses.

Population

At the University of Alberta Hospitals adult patients who need treatment of medical conditions or who require surgical intervention are admitted to eighteen units designated as medical/surgical units. All full-time nurses working on these units were included in the population.

Sample

Seventy-nine full-time registered nurses participated in the validation process. This group consisted of:

1. 6 Area Supervisors,
2. 19 Unit Supervisors or Team Coordinators, and
3. 54 staff nurses.

Data Collection

Using the nursing unit timesheets, three staff nurses from each unit were randomly selected. It was assumed that this cross section of nursing personnel would provide a group of individuals representative of the nursing population on the medical/surgical units.

At a general meeting for validators, the purpose of the project was explained and the instructions for completing and returning the form were reviewed (see Appendix D). Those validators unable to attend were seen individually or in small groups. Validators were requested to return the form within two weeks by depositing it in a designated area in the Nursing Office.

At the end of the two weeks, only 45 of the original 79 questionnaires had been returned. Fortunately, it was possible to ascertain which forms were outstanding, as the nurses had been asked to indicate the nursing unit on which they were employed. The initial validation process therefore took four weeks rather than the two weeks anticipated. Seventy-one forms were completed and returned, 90% of the total sample.

Data Analysis

Results of the R.C.P. were tabulated for each skill demonstrating:

1. the total number of validators indicating the skill as being essential,
2. the percentage of validators indicating the skill as being essential,
3. the total number of validators indicating the skill as being non-essential, and
4. the total number of validators indicating required performance as Level 1, Level 2 or Level 3.

Results from medical and surgical areas were tabulated separately. This was done in anticipation that there might be wide disagreement between these two areas on certain items. On some forms, responses were omitted for certain items. Therefore, the totals of each item in some instances do not equal the number of forms circulated (see Appendix E). The level of performance selected by the majority of validators was chosen as the required level for each essential skill. Additional essential skills suggested by the validators as well as their comments were noted (see Appendices F and G).

Although there was general agreement between medical and surgical area validators on most items, some of the skills which were seen as essential on medical units were not seen as such by the validators on the surgical units and vice versa. Tables 3.1-3.10 demonstrate the tabulations for each separate Competency Group, the percent of validators finding each skill essential and the required performance level for each skill. The skills eliminated are those identified as essential by less than 70% of the validators. For purposes of eliminating skills, the responses of the medical and surgical validators were pooled. Twenty-five of the 134 original skills were eliminated by the validators.

Presentation and Discussion of Findings

Table 3.1 shows that out of the 16 original skills listed in Competency Group A, 14 were judged by the validators to be essential and to be performed at Level I: "can perform this task satisfactorily and consistently without assistance." In Competency Group A, Physical Care, the two skills eliminated were "Remove prosthetic eye" and "Care of hearing aid". There were differing opinions between medical and surgical validators in relation to these skills with 58% of the medical validators compared to 38% of the surgical validators seeing "Remove prosthetic eye" as being essential. In "Care of the hearing aid", 81% of the medical validators indicated this as an essential skill as opposed to 41% of the surgical validators.

Table 3.1

Competency Group A: Physical Care

Skill	% of Validators Finding the Skill Essential: Medicine	% of Validators Finding the Skill Essential: Surgery	Required Level of Performance	Skills Eliminated
A-1 Give complete bedbath	100	100	1	
A-2 Assist with tub bath or shower	100	97	1	
A-3 Give oral hygiene	100	100	1	
A-4 Care for dentures	100	100	1	
A-5 Give eye care	84	72	1	
A-6 Remove prosthetic eye	53	38		x
A-7 Give care to nose	91	82	1	
A-8 Give care to ears	81	74	1	
A-9 Care for hearing aid	81	41		x
A-10 Shampoo, comb and brush hair	100	97	1	
A-11 Give perineal care	88	92	1	
A-12 Care for feet, hands, nails	100	100	1	
A-13 Give facial shave	88	90	1	
A-14 Dress and undress patient	100	87	1	
A-15 Change gown of patient with IV	100	100	1	
A-16 Give bedpans and urinals	100	100	1	

Table 3.2

Competency Group B: Comfort Measures

Skill	% of Validators Finding The Skill Essential Medicine	 Surgery	Required Level of Performance	Skill Eliminated
B-1 Make and change beds	100	97	1	
B-2 Give back rub	100	100	1	
B-3 Give special care to pressure areas	97	100	1	
B-4 Position patient to maintain good body alignment	97	100	1	
B-5 Physically comfort patient	94	95	1	
B-6 Provide aesthetic environment for patient	100	100	1	

Table 3.3

Competency Group C: Ambulation & Patient Transportation

Skill	% of Validators Finding the Skill Essential		Required Level of Performance	Skills Eliminated
	Medicine	Surgery		
C-1 Transfer from bed to chair	100	100	1	
C-2 Transfer from bed to stretcher	100	100	1	
C-3 Use patient lift	75	44		x
C-4 Transport via bed, stretcher, wheelchair	100	97	1	
C-5 Give active and passive exercises	94	97	1	
C-6 Assist patient to walk, sit, stand	100	100	1	
C-7 Assist patient to turn in bed	100	100	1	
C-8 Assist with use of walker	81	90	1	
C-9 Instruct patient in crutch walking	38	62		x
C-10 Practice good body mechanics	97	97	1	

Table 3.4

Competency Group D: Physical Assessment

Skill	% of Validators Finding the Skill Essential: Medicine	% of Validators Finding the Skill Essential: Surgery	Required Level of Performance	Skills Eliminated
D-1 Take vital signs	100	100	1	
D-2 Take apical heart rate	97	90	1	
D-3 Do neurological assessment	97	97	1	
D-4 Assess tissue turgor	88	87	1	
D-5 Auscultate for breath sounds	78	73	2	
D-6 Auscultate for bowel sounds	72	82	2	
D-7 Palpate for abdominal distention	88	90	2	
D-8 Measure height (in cm) and weight (in kg)	100	100	1	
D-9 Assess drainage, flow	97	97	1	

Table 3.5

Competency Group E: Fluid and Nutritional Balance

Skill	% of Validators Finding the Skill Essential		Required Level of Performance	Skills Eliminated
	Medicine	Surgery		
E-1 Prepare patient for meals	100	100	1	
E-2 Feed patient	100	87	1	
E-3 Gavage patient	94	51	2	
E-4 Maintain IV's	100	100	1	
E-5 Measure intake and output	100	100	1	

Table 3.6

Competency Group F: Aseptic Techniques

Skill	% of Validators Finding the Skill Essential		Required Level of Performance	Skills Eliminated
	Medicine	Surgery		
F-1 Put on sterile gloves	100	97	1	
F-2 Set up and add to sterile field	100	100	1	
F-3 Change dressings	100	100	1	
F-4 Shorten or remove drains	75	95	2	
F-5 Insert superficial wound packing	75	92	2	
F-6 Remove packing from superficial wound	78	73	2	
F-7 Remove sutures	97	100	1	
F-8 Irrigate wounds	88	95	2	
F-9 Debride wound	63	67	2	x
F-10 Apply sterile compresses	88	95	1	
F-11 Give sitz bath	66	73	1	
F-12 Give tracheotomy care	53	51	3	x
F-13 Insert and remove urethral catheter for female patient	69	82	1	
F-14 Insert and remove urethral catheter for male patient	56	62	2	x
F-15 Give catheter care	97	100	1	
F-16 Irrigate bladder	81	73	2	
F-17 Set up and monitor intermittent or continuous bladder irrigation	41	78	2	x

Table 3.7

Competency Group G: General Nursing Procedures

	% of Validators Finding the Skill Essential		Required Level of Performance	Skills Eliminated
	Medicine	Surgery		
G-1 Wash hands	100	100	1	
G-2 Apply heat	97	95	1	
G-3 Apply cold	88	90	1	
G-4 Sponge to reduce temperature	97	100	1	
G-5 Administer oxygen by mask, nasal catheter, cannula	100	100	1	
G-6 Insert and remove oral airway	75	49		x
G-7 Do CPR	97	97	1	
G-8 Administer IPPB	84	74	2	
G-9 Suction nasopharyngeal passages	94	92	2	
G-10 Assist patient who is vomiting	100	97	1	
G-11 Assist patient who is choking	97	97	1	
G-12 Assist patient with coughing or deep breathing	94	100	1	
G-13 Administer cold nebulization	100	100	1	
G-14 Assist patient with postural drainage	88	62	2	
G-15 Collect sputum specimen	97	95	1	
G-16 Do shave preparation	97	100	1	
G-17 Do skin preparation	84	97	1	
G-18 Insert nasogastric tubes	91	87	2	
G-19 Irrigate nasogastric tubes (levine or salem sump)	94	90	2	
G-20 Remove nasogastric tubes	94	87	1	
G-21 Irrigate gastric and intestinal tubes	63	63		x
G-22 Insert rectal tubes	84	82	1	
G-23 Give enemas	91	100	1	
G-24 Disimpact feces	88	82	1	

Table 3.7 (continued)

	% of Validators Finding the Skill Essential		Required Level of Performance	Skills Eliminated
	Medicine	Surgery		
G-25 Care for ostomies	84	73	2	
G-26 Give douches	38	36		x
G-27 Test urine for glucose, acetone, protein	100	100	1	
G-28 Strain urine	84	77	1	
G-29 Apply condom drainage device	66	54		x
G-30 Collect urine and stool specimen	97	97	1	
G-31 Take swabs	97	100	1	
G-32 Care for tissue specimen	53	49		x
G-33 Empty and reactive hemovacs	69	100	2	
G-34 Apply abdominal and T-binders	44	63		x
G-35 Apply anti-embolic stockings and tensor bandages	94	97	1	
G-36 Do stump bandaging	47	62		x
G-37 Apply slings	63	64		x
G-38 Apply rehabilitative splints	63	49		x
G-39 Care for casts	56	74		x
G-40 Apply skin traction	34	49		x
G-41 Apply pelvic traction using pelvic belt	31	46		x
G-42 Maintain traction	47	64		x
G-43 Apply restraints	97	95	2	
G-44 Remove dangerous objects from patient	94	90	1	
G-45 Carry out isolation techniques	88	95	2	
G-46 Care for body after death	97	92	2	

Table 3.8

Competency Group H: Administration of Medications

	% of Validators Finding the Skill Essential		Required Level of Performance	Skills Eliminated
	Medicine	Surgery		
H-1 Prepare medications for administration	100	100	1	
H-2 Give oral medications	100	100	1	
H-3 Give intramuscular, subcutaneous or intradermal injections	100	100	1	
H-4 Prepare and give different types of insulin	97	100	1	
H-5 Administer IV medication into IV solution bag or Buretrol	97	100	2	
H-6 Administer medication by inhalation	100	92	2	
H-7 Instill eye drops and ointments	94	73	1	
H-8 Instill nose and ear drops and ointments	91	63	1	
H-9 Apply topical medication	84	85	1	
H-10 Insert suppositories	97	97	1	
H-11 Give medicated baths and shampoos	81	72	1	

Table 3.9

Competency Group I: Assist with Procedures

		% of Validators Finding the Skill Essential		Required Level of Performance	Skills Eliminated
		Medicine	Surgery		
I-1	Assist with abdominal paracentesis	66	41		x
I-2	Assist with joint aspiration and/or injection	75	54		x
I-3	Assist with lumbar puncture	81	51		x
I-4	Assist with thoracentesis	69	51		x
I-5	Assist with pelvic examination	56	44		x
I-6	Assist with cutdowns	91	77	2	
I-7	Assist with application and removal of casts	34	46		x

Table 3.10

Competency Group J: Operate and Manipulate Equipment

	% of Validators Finding the Skill Essential		Required Level of Performance	Skills Eliminated
	Medicine	Surgery		
J-1 Manipulate beds, stretchers, wheelchairs	100	97	1	
J-2 Manipulate specialized beds (Stryker frame, Circo-lectric bed)	47	64		x
J-3 Use footboards and bed cradles	100	90	1	
J-4 Operate alternating pressure mattresses	81	67	2	
J-5 Use hot and cold humidifiers	84	67	1	
J-6 Operate wall suction equipment	72	90	2	
J-7 Operate Wangenstein gastric suction equipment	81	82	2	
J-8 Operate Gomco thoracic suction	81	85	2	
J-9 Operate fire extinguishers	100	100	2	
J-10 Operate autoclave	75	95	2	

Table 3.2 shows that all six original skills in Competency Group B were retained and Level I was chosen as the desired level of performance.

Table 3.3 shows that out of ten original skills in Competency Group C, eight were retained. The required level of performance was Level I. Skill C-3, "Use patient lift", was seen as essential by 75% of the validators working on medical units, but only 44% of the nurses working on surgical units identified this as an essential skill. A similar disparity between nurses working on medical and surgical units is evident for C-9. It could be speculated that the validators from the Orthopedic Units, which are designated as surgical units, were responsible for this disparity as they would all undoubtedly view this as an essential skill.

Table 3.4 indicates that all nine skills in Competency Group D were retained. Three skills were seen to be required at Level II, "can perform this task but required initial supervision and assistance."

Table 3.5 indicates that all five skills in Competency Group E were retained although there was a marked disparity between the perceptions of validators from medical units and the perceptions of validators from surgical units on Skill E-3, "Gavage patient." This skill was validated as essential with the required level of performance selected being Level II, while the four other skills were validated at Level I. Skill E-3, "Gavage patient", was retained because 94% of medical validators perceived this skill to be essential as opposed to 51% of surgical validators. The reason for this could be due to the increase in the use of Total Parenteral Nutrition for surgical patients who would previously have been fed by the enteral route. On medical units, enteral or "tube" feeding is still a common practice.

Table 3.6 shows that out of the 17 original skills in Competency Group F, 13 were retained. There was general agreement on eliminating three of the skills, F-9, "Debride wound", F-12, "Give tracheotomy care", and F-14, "Insert and remove urethral catheter for male patient." However, in the case of F-17, "Set up and monitor intermittent or continuous bladder irrigation", there was a marked difference between the medical and surgical areas regarding this skill. Forty-one percent of the medical validators viewed the skill as essential as opposed to 78% of the surgical validators. The fact that the Urological service is included in the surgical areas may account for this discrepancy.

It was a surprise to find that F-12, "Give tracheotomy care", was eliminated. Patients with tracheotomies are frequently cared for on the medical/surgical areas and nurses on these areas are responsible for their care. It is speculated that nurses are relying more on paraprofessionals such as Respiratory Technologists to carry out such skills, and over time are viewing these skills as not falling within the domain of nursing.

Regarding the elimination of Skill F-14, "Insert and remove urethral catheter for male patient", female nurses have not been taught this skill, nor have they been expected to perform this skill. It is the expectation of both nurse and male patients that a male orderly is available to perform this procedure. Consequently nurses have not been socialized to accept this task as part of their duties nor do male patients view it as part of the female nurse's role. The increasing shortage of male orderlies however, may have implications for nurses relative to the performance of this skill.

Table 3.7 shows that out of 46 skills in Competency Group G, 13 were not retained although there was general agreement concerning most of those skills eliminated. In this competency group, the skill "Insert and remove an oral airway" was seen as essential by 75% of the medical validators and by only 49% of the surgical validators. G-29, "Apply condom drainage device", was seen as non-essential by nurses in both the medical and surgical areas. Nurses expect male orderlies to be available to perform this skill. While this may be the case, it is essential that Registered Nurses realize that they are responsible for care given to their patients and that they should be knowledgeable about these procedures in order to provide adequate supervision.

Seven of the eliminated skills in Competency Group G appear to be related specifically to Orthopedic Nursing which is now being recognised as a specialty area. Although patients requiring Orthopedic Surgery may be admitted to the medical-surgical areas, it is unrealistic to expect every nurse to possess these orthopedic nursing skills. The nurses working in orthopedic areas should be used as resource people. Indeed it would be wise to encourage nurses to use each other as consultants when specific specialty skills are required.

All skills listed in Competency Group H were retained with high agreement on these being essential skills. Two skills were seen as being acceptable at Level II.

In Competency Group I, 6 of the 7 skills were eliminated. However, the validators from the medical areas generally tended to view the skills in this group as essential. These are more commonly performed on medical areas, whereas patients admitted to the surgical areas have usually been diagnosed and admitted for a surgical procedure. It can be speculated that perhaps these skills are not performed frequently or perhaps assisting the physican with diagnostic procedures is not perceived to be an essential part of nursing practice.

Table 3.10 shows that one skill in Competency Group I was not retained. Skills J-4 and J-5 were seen as essential primarily by the medical validators, once more demonstrating the differences existing in medical areas and in surgical areas.

Although there was some disagreement regarding the skills that were eliminated, there was generally a high level of agreement among the validators regarding those skills which were essential on the medical/surgical units. Generally there was also agreement regarding the required level of performance. This again suggests that nurses working in patient care areas can identify the essential skills and the level of skill performance required of newly employed nurses. Based on these findings it appears that there are manual nursing skills required on the medical/surgical areas, and further, that nurses working on these areas are able to identify those essential manual skills which newly employed nurses must be able to perform.

Summary

In this Chapter, the intent was to identify the manual skills needed by nurses employed to work on medical/surgical units at the University of Alberta Hospitals. The instrument developed and validated by the R.N.A.B.C. was used to accomplish this task. The skills contained in this instrument were modified and were then validated by nurses working on the medical/surgical units. The Required Competency Profile thus developed contained the skills identified by practicing experts as essential skills for nurses working on medical/surgical units. The level at which each skill should be performed was also identified and included in the profile.

The findings revealed that practicing nurses are able to identify those skills which nurses working on medical/surgical units must be able to perform. This finding is important for nursing education since it suggests that input regarding the skill component of nursing education programs should be sought from practicing experts.

Although the profile contained the skills needed by nurses working on medical/surgical units, analysis of the data revealed that there are skills specific to medical units and skills specific to surgical units. This finding is important since it suggests that unit specific skills need to be identified and included in any orientation strategy.

In problem solving terms, the identification of required manual nursing skills described in this chapter provides the beginning of a data base needed to help clarify the problem of orientation and assists in the formulation of the diagnosis of the problem.

CHAPTER 4

DIAGNOSIS II - IDENTIFICATION OF LEARNING NEEDS

The focus of this investigation has been on the need for more effective orientation practices in relation to newly employed nurses at the University of Alberta Hospitals. For reasons cited earlier, improved orientation strategies are needed if nurses are to function as required and if the needs of patients are to be met.

Judging from the amount of material written on the topic, many agencies are facing a problem similar to that being experienced by the Hospital, and a variety of approaches has been suggested which purport to meet the learning needs of nurses created by the dynamic and complex hospital setting. Too frequently, however, these programs have not had the desired effect, mainly because they have not been systematically planned to meet the documented needs of nurses.

The problem solving model is proposed in this thesis as a way of looking at the problem of orientation at the University of Alberta Hospitals. Fundamental to this model is the development of a diagnosis. This activity requires the collection of information which gives a clear picture of the desired state and the current situation.

In the previous chapter, the data collected identified the desired state. That is, a profile of essential skills along with the level at which the skills must be performed was developed. Nurses employed to work on medical/surgical units must be able to perform these skills if they are to function as required on these units. The intent of this Chapter is to report on the self-diagnosed learning needs of nurses newly employed to work on medical/surgical units at the University of Alberta Hospitals. Those required skills which nurses indicated that they were unable to perform represents the present, and indeed, the undesired state.

Instrument Construction - Competency Analysis Profile (CAP)

The Competency Analysis Profile was developed from the Required Competency Profile described in Chapter 3. The Required Competency Profile was revised to include the comments and the additional skills suggested by the validators. The profile was then composed of two sections. Section A consisted of 109 validated skills from the original list and Section B consisted of the additional skills suggested by the original validators. The profile was circulated to 25% of the original validators who were requested to revalidate the essential skills and the required level of performance.

Using a table of random numbers, twenty of the original 79 validators were selected. This group included staff nurses from 12 of the 19 nursing units and five unit supervisors. No area supervisors were selected. Four units were unrepresented, two medical and two surgical units. Seventeen revalidated Profiles were returned in two weeks.

On the whole, respondents indicated agreement with the previously validated skills. Any occurrence of disagreement was with the required level of performance selected which validators indicated should be at a greater level of expertise than that originally chosen. Since disagreement was minimal no changes were made. Data from Section B were processed in the same manner as the data from the original Required Competency Profile. Four of the twelve additional skills were eliminated and the remaining skills were incorporated into the Competency Analysis Profile (see Appendix H).

An information sheet was placed on the front of the Profile in order to collect demographic data about work experience and education of the nurses in the sample (see Appendix H). Reliability of the CAP was established by using the Gutman split-half Reliability Test which resulted in a rating of 0.91.

Population

The population consisted of all newly employed nurses assigned to the units designated as medical/surgical units at the University of Alberta Hospitals.

Sample

The sample consisted of 100 nurses employed to work on the medical/surgical units. The characteristics of the sample varied in both educational background and work experience (see Table 4.1). Fifty-one nurses were educated in hospital diploma programs, 27 nurses were educated in college programs and 22 nurses were educated in baccaulaureate programs.

Of the total sample of one hundred, 47 had less than one year of experience, 14 had between one and three years, 11 had three to five years, and 28 had over five years. In the sample there were also 6 nurses who had recently completed a refresher program before reentering nursing. Four of these were originally from a hospital diploma program, and 2 were from a university program.

The 47 nurses with less than one year's experience consisted of 19 nurses from a hospital diploma program, 16 from a college program and 12 from a university program. No attempt was made to identify the specific program attended.

Table 4.1

Selected Demographic Characteristics of Sample

Years of Experience	Type of Education Hospital	College	University
0	19	16	12
1 - 2	4	8	2
3 - 5	6	1	4
Over 5	22	2	4

Data Collection

The data were collected over a period of four and one-half months. Nurses included in the sample were requested to complete the Competency Analysis Profile within 3 days of commencing employment at the University of Alberta Hospitals. The time frame of 3 days was used in an attempt to ensure that the participants had not already performed any of the skills since the beginning of their current employment. The nurses were requested to:

1. identify the skills which they could perform,
2. indicate the level at which they could perform each skill,
3. complete the information sheet on the front of the questionnaire.

The participants were assured verbally and in writing that they would remain anonymous. Identification of participants was not requested.

Data Analysis

The data were coded, keypunched and analyzed by computer. Raw scores and percentages were utilized to identify the numbers of participants who were able to perform each skill. Cross-tabulations were done to identify numbers of participants who could perform at each skill level.

The ordinal nature of the data restricted the statistical manipulation that could be undertaken. Therefore, the data are presented in histograms and tables.

The skills within each competency group were examined in order to ascertain the percentage of respondents reporting competence at the required skill level. Tables 4.2 - 4.11 demonstrate these findings. Those skills which could not be performed at the required skill level by at least 10% of the respondents are reported in Tables 4.12 - 4.30.

While it is this writer's belief that the critical nature of nursing should be reflected in practitioners' abilities to perform all of the skills identified as essential to basic nursing care, there has to be a realistic cutoff point in terms of the training which hospitals can provide. For this reason, only those skills which cannot be performed at the required level by 10% or more of the respondents are analyzed. Histograms are used to indicate the percentage of nurses according to education and experience who are unable to perform each skill at the required level (See Appendix I).

As demonstrated in Tables 4.2 - 4.11 a number of respondents reported competence at the required level of performance for many of the skills, particularly those which are sometimes termed "basic nursing skills". In fact, in Competence Group B, all of the respondents were able to perform this group of skills at the required performance level. It must be noted however, that competence at the required level decreased as the skills became more complex. That is, the skills which respondents indicated that they were unable to perform at the required level, increased in number. This is demonstrated in Competency Group D through J in which 10% or more of the respondents reported that they were unable to perform the skills at the required level.

Further analysis is presented of those skills which 10% or more of the respondents reported that they were unable to perform at the required level (Tables 4.12 - 4.30). The data are also examined in terms of the demographic variables of the respondents (Appendices I-K).

Presentation and Discussion of Findings

Analysis of the data revealed that there was a wide variation in the skills which respondents reported that they were unable to perform. Several of the skills which large numbers of the respondents indicated that they were unable to perform at the required level, were skills that perhaps had not been viewed as basic nursing procedures until recently. Examples of these are "Initiating intravenous therapy", "Monitoring total parenteral nutrition", "Gavage patient", and "Remove wound packing".

Table 4.2

Competency Group A: Administer Personal Hygiene
(% reporting ability to perform skill at
the required level of competence)

No.	Skill	Percentage of Respondents
1	Give complete bedbath	97
2	Assist with tub bath or shower	97
3	Give oral hygiene	97
4	Care for dentures	98
5	Give eye care	70
6	Give care to nose	89
7	Give care to ears	95
8	Shampoo, comb and brush hair	97
9	Give perineal care	98
10	Care for feet, hands, nails	91
11	Give facial shave	93
12	Dress and undress patient	98
13	Change gown of patient with I.V.	97
14	Give bed pans and urinals	98

Table 4.3

Competency Group B: Provide Comfort Measures
(% reporting ability to perform skill at
the required level of competence)

No.	Skill	Percentage of Respondents
1	Make and change beds	98
2	Give back rub	98
3	Give special care to pressure areas	98
4	Position patient to maintain good body alignment	95
5	Physically comfort patient	98
6	Provide aesthetic environment for patient	98

Table 4.4

Competency Group C: Ambulate and Transport Patients
(% reporting ability to perform skill at
the required level of competence)

No.	Skill	Percentage of Respondents
1	Transfer patient from bed to chair	95
2	Transfer patient from bed to stretcher	85
3	Transport patient via bed, stretcher or wheelchair	94
4	Give active and passive exercises	82
5	Assist patient to walk, sit or stand	95
6	Assist patient to turn in bed	97
7	Assist patient with use of walker	89
8	Practice good body mechanics	94

Table 4.5

Competency Group D: Physical Assessment Techniques
(% reporting ability to perform skill at
the required level of competence)

No.	Skill	Percentage of Respondents
1	Take vital signs	96
2	Take apical heart rate	90
3	Do neurological assessment	81
4	Assess tissue turgor	82
5	Auscultate for breath sounds	84
6	Auscultate for bowel sounds	87
7	Palpate for abdominal distension	86
8	Measure height (in cm) and weight (in kg)	97
9	Assess drainage, flow	77

Table 4.6

Competency Group E: Maintain Fluid and Nutritional Balance
(% reporting ability to perform skill at
the required level of competence)

No.	Skill	Percentage of Respondents
1	Prepare patient for meals	96
2	Feed patient	97
3	Gavage patient	86
4	Maintain I.V.'s	76
5	Initiate I.V.'s	52
6	Regulate I.V. flow using IVAC machine	72
7	Monitor TPN	53
8	Monitor blood administration	73
9	Apply blood pump	38
10	Measure intake and output	98

Table 4.7

Competency Group F: Aseptic Technique
(% reporting ability to perform skill at
the required level of competence)

No.	Skill	Percentage of Respondents
1	Put on sterile gloves	96
2	Set up and add to sterile field	85
3	Change dressings	89
4	Shorten or remove drains	86
5	Maintain saratoga sump	68
6	Insert superficial wound packing	79
7	Remove packing from superficial wound	77
8	Remove sutures	80
9	Apply skin tapes	74
10	Irrigate wounds	85
11	Apply sterile compresses	87
12	Give sitz bath	79
13	Insert and remove urethral catheter for female patients	74
14	Give catheter care	96
15	Irrigate bladder	79

Table 4.8

Competency Group G: General Nursing Procedures
(% reporting ability to perform skill at
the required level of competence)

No.	Skill	Percentage of Respondents
1	Wash hands	94
2	Apply heat	87
3	Apply cold	86
4	Sponge to reduce temperature	93
5	Administer oxygen by mask, nasal catheter or nasal canula	86
6	Do CPR	50
7	Administer IPPB	64
8	Suction nasopharayngeal passages	88
9	Assist patient who is vomiting	95
10	Assist patient who is choking	60
11	Assist patient with coughing or deep breathing	74
12	Administer cold nebulization	68
13	Assist patient with postural drainage	83
14	Collect sputum specimen	79
15	Do shave preparation	77
16	Do skin preparation	78

Table 4.8 (continued)

No.	Skill	Percentage of Respondents
17	Insert nasogastric tubes	81
18	Irrigate nasogastric tubes (levine or salem sump)	88
19	Remove nasogastric tubes	75
20	Insert rectal tubes	82
21	Give enemas	93
22	Disimpact feces	79
23	Care for ostomies	85
24	Test urine for glucose, acetone or protein	91
25	Strain urine	77
26	Collect urine and stool specimen	87
27	Take swabs	86
28	Empty and reactivate hemovacs	82
29	Apply anti-embolic stockings and tensor bandages	79
30	Apply restraints	97
31	Remove dangerous objects from patients	80
32	Carry out isolation techniques	91
33	Care for body after death	75

Table 4.9

Competency Group H: Administer Medications
(% reporting ability to perform skill at
the required level of competence)

No.	Skill	Percentage of Respondents
1	Prepare medications for administration	87
2	Give oral medications	92
3	Give intramuscular, subcutaneous or intradermal injections	84
4	Prepare and give different types of insulin	74
5	Administer I.V. medication into I.V. solution bag or buretrol	89
6	Administer medication by inhalation	85
7	Instill eye drops and ointments	86
8	Instill nose and ear drops and ointments	80
9	Apply topical medication	91
10	Insert suppositories	95
11	Give medicated baths and shampoos	86

Table 4.10

Competency Group I: Assist with Procedures
(% reporting ability to perform skill at
the required level of competence)

No.	Skill	Percentage of Respondents
1	Assist with cutdowns	49
2	Assist with collection of blood gases	66

Table 4.11

Competency Group J: Operate and Care for Equipment
(% reporting ability to perform skill at
the required level of competence)

No.	Skill	Percentage of Respondents
1	Manipulate beds, stretchers or wheelchairs	87
2	Use foot boards and bed cradles	92
3	Operate alternating pressure mattresses	81
4	Use hot and cold humidifiers	66
5	Operate wall suction equipment	95
6	Operate Wangenstein gastric suction equipment	66
7	Operate Gomco thoracic suction	72
8	Operate fire extinguishers	79
9	Operate autoclave	54

Table 4.12

Competency Group A: Physical Care

Skill	Req'd Level of Performance	No. able to perform skill at each level 1	2	3	No. unable to perform skill at any level	% unable to perform skill at required level
A5 Give eyecare	1	70	26	2	2	30
A6 Give care to nose	1	89	7	2	1	11

Table 4.13

Competency Group C: Ambulation and Patient Transportation

Skill	Req'd Level of Performance	No. able to perform skill at each level 1	2	3	No. unable to perform skill at any level	% unable to perform skill at required level
C-2 Transfer from bed to stretcher	1	85	12	3	0	15
C-4 Give active and passive exercises	1	82	16	2	0	18
C-7 Assist with use of walker	1	89	7	2	2	11

Table 4.14

Competency Group D: Physical Assessment

Skill	Req'd Level of Performance	No. able to perform skill at each level			No. unable to perform skill at any level	% unable to perform skill at required level
		1	2	3		
D-2 Take apical heart rate	1	89	7	2	2	10
D-3 Do neurological assessment	1	81	16	3	0	19
D-4 Assess tissue turgor	1	82	9	4	5	18
D-5 Auscultate for breath sounds	2	56	24	8	8	16
D-6 Auscultate for bowel sounds	2	59	27	4	9	13
D-7 Palpate for abdominal distention	2	68	17	9	5	14
D-9 Assess drainage, flow	1	77	18	4	1	23

Table 4.15

Competency Group E: Fluid and Nutritional Balance

Skill	Req'd Level of Performance	No. able to perform skill at each level 1	2	3	No. unable to perform skill at any level	% unable to perform skill at required level
E-3 Gavage patient	2	71	15	4	10	14
E-4 Maintain IV's	1	76	19	3	2	24
E-5 Initiate IV's	2	30	22	12	36	48
E-6 Regulate IV's flow using IVAC machine	2	42	30	2	26	28
E-7 Monitor TPN	2	14	39	14	33	47
E-8 Monitor blood administration	2	40	33	3	24	27
E-9 Apply blood pump	2	20	18	3	59	62

Table 4.16

Competency Group F: Aseptic Techniques

Skill	Req'd Level of Performance	No. able to perform skill at each level 1	2	3	No. unable to perform skill at any level	% unable to perform skill at required level
F-2 Set up and add to sterile field	1	85	12	2	1	15
F-3 Change Dressings	1	89	8	2	1	11
F-4 Shorten or remove drains	2	70	16	5	9	14
F-5 Maintain Saratoga sump	2	39	29	6	26	32
F-6 Insert superficial wound packing	2	57	22	4	17	21
F-7 Remove packing from superficial wound	2	58	19	5	18	23
F-8 Remove sutures	1	80	13	4	3	20
F-9 Apply skin tapes	1	74	13	4	9	26
F-10 Irrigate wounds	2	66	19	6	9	15
F-11 Apply sterile compresses	1	87	9	2	2	13
F-12 Give sitz bath	1	79	13	2	6	21
F-13 Insert and remove urethral catheter for female patient	1	74	18	5	3	26
F-15 Irrigate bladder	2	58	21	5	16	21

Table 4.17

Competency Group G: General Nursing Procedures

Skill	Req'd Level of Performance	No. able to perform skill at each level 1	2	3	No. unable to perform skill at any level	% unable to perform skill at required level
G-2 Apply heat	1	87	5	2	6	13
G-3 Apply cold	1	86	7	1	6	14
G-5 Administer oxygen by mask, nasal catheter, cannula	1	86	7	6	1	14
G-6 Do CPR	1	50	36	5	9	50
G-7 Administer IPPB	2	31	33	5	31	36
G-8 Suction nasopharyngeal passages	2	65	23	5	7	12
G-10 Assist patient who is choking	1	60	26	5	9	40
G-11 Assist with coughing or deep breathing	1	74	16	6	4	26
G-12 Administer cold nebulization	1	68	18	4	10	32
G-13 Assist with postural drainage	2	48	35	8	9	17
G-14 Collect sputum specimen	1	79	17	4	0	21
G-15 Do shave preparation	1	77	18	3	2	23
G-16 Do skin preparation	1	78	16	3	3	22

Table 4.17 (continued)

Competency Group G: General Nursing Procedures

Skill	Req'd Level of Performance	No. able to perform skill at each level			No. unable to perform skill at any level	% unable to perform skill at required level
		1	2	3		
G-17 Insert nasogastric tubes	2	55	26	6	13	19
G-18 Irrigate nasogastric tubes	2	66	22	4	8	12
G-19 Remove nasogastric tubes	1	75	12	4	9	25
G-20 Insert rectal tubes	1	82	6	4	8	18
G-22 Disimpact feces	1	79	13	3	5	21
G-23 Care for ostomies	2	44	41	6	9	15
G-25 Strain urine	1	77	16	1	6	23
G-26 Collect urine and stood specimens	1	87	9	2	2	13
G-27 Take swabs	1	86	11	2	1	14
G-28 Empty and reactivate hemovacs	2	68	14	6	12	18
G-29 Apply anti-embolic stockings and tensor bandages	1	79	15	3	3	21
G-31 Remove dangerous objects from patient	1	80	14	3	3	20
G-33 Care for body after death	2	34	41	6	19	25

Table 4.18

Competency Group H: Medication Administration

Skill	Req'd Level of Performance	No. able to perform skill at each level 1	2	3	No. unable to perform skill at any level	% unable to perform skill at required level
H-1 Prepare medication for administration	1	87	8	4	1	13
H-3 Give intramuscular, subcutaneous or intradermal injections	1	84	14	1	1	16
H-4 Prepare and give different types of insulin	1	74	21	2	3	26
H-5 Administer IV medication into bag	2	62	27	3	8	11
H-6 Administer medication by inhalation	2	59	26	4	11	15
H-7 Instill eye drops and ointments	1	86	12	2	0	14
H-8 Instill nose and ear drops and ointments	1	80	17	2	1	20
H-11 Give medicated baths and shampoos	1	86	10	3	1	14

Table 4.19

Competency Group I: Assist with Procedures

Skill	Req'd Level of Performance	No. able to perform skill at each level 1	2	3	No. unable to perform skill at any level	% unable to perform skill at required level
I-1 Assist with IV cutdown	2	26	23	6	45	51
I-2 Assist with collection of blood gases	2	41	25	7	27	34

Table 4.20

Competency Group J: Operate and Manipulate Equipment

Skill	Req'd Level of Performance	No. able to perform skill at each level 1	2	3	No. unable to perform skill at any level	% unable to perform skill at required level
J-1 Manipulate beds, stretchers, wheelchairs	1	87	10	2	1	13
J-3 Operate alternating pressure mattresses	2	55	26	2	17	19
J-4 Use hot and cold humidifiers	1	66	22	1	11	34
J-6 Operate Wangenstein gastric suction equipment	2	37	29	4	30	34
J-7 Operate Gomco thoracic suction	2	42	30	11	17	28
J-8 Operate fire extinguishers	2	49	30	3	18	21
J-9 Operate autoclave	2	23	31	4	42	46

Table 4.21

Demographic Information
(Respondents Having Completed a Nursing Refresher Program)

Nursing Preparation	Years of Experience	Years Retired	Year of Refresher Program	No. of Skills Unable to be Performed at Required Level
Hospital	3 years	14 years	1980	1
Hospital	6 years	15 years	1980	62
*Hospital	7.5 years	12 years	1972	54
University	5 years	10 years	1979	30
University	7 years	13 years	1980	20
Hospital	2.5 years	13 years	1980	62

* This respondent has nursed in a nursing home after her refresher program. She had been away from nursing for 4 years before coming to U.A.H.

Responsibility for these skills, previously considered as medical responsibilities, has been transferred to professional nurses. In some cases the respondents indicated that they were unable to perform these skills at all. It is to be expected that in the future more delegation of such skills will take place. The employer has a responsibility to ensure that all nurses are competent to perform these skills. The professional nursing association, which is involved in developing the guidelines for transferring the responsibilities from the medical to nursing personnel, should ensure that not only the employing agencies but also the educational institutions are aware of what is expected of a professional nurse. Hesitation to meet the expectations of the employers may lead to the development of physician's assistants and other categories of health care workers who will further reduce the nurse's role in patient care.

The respondents reported that they were unable to perform skills such as respiratory techniques and physiotherapy procedures. These skills have become primarily the responsibility of other health professionals. It should be stressed however that these are skills which nurses often have to perform, or at least should be able to perform if they wish to remain in control of the care of their patients. Realistically the paraprofessionals are not always readily available when a patient requires a treatment. If nurses are uncomfortable with the skills, they may perform the procedures to the detriment of the patient.

The results in Chapter 3 indicated that there were some differences in the skill requirements of the medical/surgical units. This suggests that orientation needs of nurses employed to work on these units would vary. There are however, some skills required on all units which generally, presented difficulty to the respondents. For example, 50% reported that they could not perform cardiopulmonary resuscitation (CPR) as required. This finding has been verified continuously in orientation as well as in the annual CPR reviews. CPR is a critical skill and it may be that all new staff should be required to participate in a formalized certification program.

As well, a significant number of the respondents indicated that they were unable to initiate and monitor intravenous therapy, or to regulate an intravenous using an IVAC machine; 48% of the respondents appeared unable to initiate an intravenous. Given the large number of intravenous infusions in use at the University of Alberta Hospitals (approximately 1,200 per month), consideration should be given to enlarging the intravenous team so that its members can start all intravenous infusions. If this is not feasible, then nurses need to be provided with the opportunity to become and remain proficient in performing this skill.

Fifty-one percent of the respondents were unable to use a fire extinguisher. This response occurred following the fire and safety lecture given by the personnel department. It is interesting to note that the fire and safety lecture consist of a film. No opportunity is provided for new staff to handle the equipment.

While there are differences in the skill requirements on the medical/surgical units, from the number of skills on which there was high and even 100% agreement between the experts, there are skills common to all areas. In fact it can be speculated that this commonality extends even to "specialty units". This suggests that a co-ordination of efforts is needed to prevent costly duplication of teaching.

Many of the respondents identified Physical Assessment techniques as an area in which they perceived themselves to be deficient. This was a surprising finding particularly since physical assessment skills are being stressed in nursing programs. Since the nursing process is based on data obtained through sound patient assessment, it is important that nurses be skilled at performing physical assessment techniques.

As can be seen from Table 4.21 the respondents identified as refresher graduates indicated that they were unable to perform a large number of skills. This might be due to a lack of confidence, or they may in fact, be unable to perform the required skills. If indeed these nurses are unable to perform the required skills, then the Refresher Program needs to be reviewed and revised since one of its objectives is to prepare nurses to function at the level of a beginning practitioner. If refresher graduates lack confidence then a support mechanism must be provided until their confidence returns.

It is recognized that nurses must keep abreast of and be knowledgeable about continuing developments in medical science and technology that have implications for nursing practice. However, the acquisition of new knowledge must not be gained at the expense of the basic nursing skills necessary for providing patient care.

The responsibility for competency relative to basic nursing skills must be shared. Administrators of nursing education programs who are in the process of modifying the length of their programs must ensure that there is sufficient time in the programs to allow students to practice these very vital skills in the clinical setting. The employing agency should assume responsibility for checking on the competencies of the newly employed nurse and for providing them with the opportunity to learn the required skills in an atmosphere conducive to learning. Finally, the nurse is responsible for identifying to her employer those areas in which she needs assistance.

The findings show that many skills were identified with which newly employed nurses required assistance. However, different individuals had different needs, and, to be effective, an orientation program must be developed to meet the individual needs of new employees. This may cause initial difficulty in program planning, but various orientation methods are identified in the literature which are worthy of consideration. For example, orientation units with preceptors or unit based instructors, learning modules and certification procedures which can be challenged, are all possible ways which can be used to assist the new employee in functioning more effectively and efficiently in a very complex organization.

More collaboration is needed between nursing education and nursing service for the purposes of interpreting the goals of nursing education and the expected role of the hospital staff nurse and decreasing the gap between the educational goals and role expectations.

Differences in Nurses' Abilities to Perform Skills in Relation to Educational Preparation

Although the subgroups within the sample were small, it is demonstrated in Table 4.22 that generally, university prepared nurses, regardless of experience, have more difficulty with basic manual nursing skills, including assessment skills, than the hospital and college

Table 4.22

Number of Skills in Which Category of "Preparation" Rank First in Inability to Perform Problematic Skills

Category	Number of Skills	Total Number
University-prepared nurses	* *	35
College-prepared nurses	* *	24
Hospital-prepared nurses	* * * * * * * * * * * * * * * * *	17

prepared nurses. A simple count was made of the number of skills in which a category of respondent groups ranked first in inability to perform problematic skills. It must be noted however, that regardless of educational preparation, the skills with which each group has difficulty are randomly scattered among the total groups of skills. (See Appendix I).

Differences in Nurses' Perceptions of their Ability to Perform Skills in Relation to Experience

Again the subgroups were small, and at first glance there does appear to be differences between the groups in terms of their abilities to perform the skills. As Table 4.23 indicates, nurses with no experience appear to have more difficulty with specific skills than those with experience. This seems particularly true as the skills become more technically advanced (see Appendix I). This finding is supported by the Howard (1971) study, in which it was suggested that new graduates require approximately three months before they feel confident in the performance of technical skills.

Table 4.23

Number of Skills in Which Category of "Experience" Rank First in Inability to Perform Problematic Skills

Category	Number of Skills	Total Number
No. experience	* *	45
1 - 2 years	* * * * * * * * * * * * * * * * * *	18
3 - 5 years	* * * * * * * *	8
Over 5 years	* * * * * *	6

Although the new graduates appear to have the most difficulty with the performance of the manual skills, the above table shows that inadequacies also exist among experienced nurses. This finding is supported by Davis (1972). This is not a surprising finding since nurses are a mobile group and changing jobs creates a need to upgrade skills or learn situation - specific skills. As Howard (1971) notes, regardless of experience, all newly employed nurses have areas of inadequacy and in any new situation require assistance in the initial period of employment.

Tables 4.24 and 4.25 show that as years of experience increase, there is no significant difference among respondent groups in the average number of skills that nurses were unable to perform. Again, it must be noted that regardless of experience, the skills with which each group has difficulty are randomly scattered among the ten competency groups and are not necessarily the same skills for each group of nurses. (See Appendix J).

Table 4.24

Means, Ranges and Standard Deviation of Number of Skills in Relation to Length of Experience

Variable	No. of Nurses	Mean	Standard Deviation
0 years	47	21.4681	19.6345
1 - 2 years	14	21.0000	31.3270
3 - 5 years	11	12.4545	13.4042
Over 5 years	28	15.3571	17.9942

Table 4.25

One Way Analysis of Variance Between Mean No. of Skills Unable to be Performed in Relation to Length of Experience

Source of Variance	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	1,176.1409	392.0469	0.917	0.4356
Within Groups	96	41,030.7307	427.4033		
Total	99	42,206.8711			

Comparison of College, Hospital and University Prepared Nurses With No Experience Unable to Perform Skills at Required Level

In this group of 47 nurses, there were 19 hospital prepared, 16 college prepared and 12 university prepared nurses. Tables 4.26 and 4.27 indicate that there is a significant difference at a 0.05 level, between the average number of skills which each group is unable to perform. Table 4.28 demonstrates that hospital prepared nurses have the least difficulty with performance of skills, while university prepared nurses perceive themselves to have the most difficulty. Again the skills which cause each group problems are randomly scattered among the total group of skills. (See Appendix K).

No attempt was made to check the nurses' perceptions of their ability to perform the skills, and it is possible that the new employees' perceptions of their ability to perform the skills might be misconceived. This is particularly true for new graduates (Howard, 1971). It is, however, important to recognize that at the time of employment, it is the nurse's perception of her abilities which is important, and a mechanism must be established to provide the required support to the new employee.

Diagnosis of the Problem

It is well established in the literature that a standard and traditional orientation program, such as the one conducted by the University of Alberta Hospitals, is ineffective because it is not based on the documented needs of the nurses. It is also indicated in the

Table 4.26

Means, Ranges and Standard Deviations of Number of Skills in Relation to Educational Preparation of Nurses with No Experience

Variable	No. of Nurses	Mean	Range	Standard Deviation
Hospital	19	10.7895	0-25	6.9007
College	16	22.6875	1-59	18.1208
University	12	36.7500	8-104	25.1509

Table 4.27

One Way Analysis of Variance Between Mean No. of Skills Unable to be Performed in Relation to Educational Preparation

				Sum of	Mean
Source of Variance	D.F.	Squares	Squares	F Ratio	F Prob.
Between Groups	2	4,992.8633	2,496.4314	8.621	.0007
Within Groups	44	12,740.8276	289.5642		
Total	46	17,733.6875			

Table 4.28

Number of Skills in Which Category of "Inexperienced/Preparation" Rank First in Inability to Perform Problematic Skills

Category	Number of Skills	Total Number
University-prepared; no experience	* *	43
College-prepared; no experience	* *	29
Hospital-prepared no experience	* *	2

literature that the competencies required in any job situation must be determined, against which the performance of new employees can be compared. Through systematic comparison, the needs of newly employed nurses can be determined, and orientation programs must then be designed to meet these identified needs.

It has been established that there are a number of skills which nurses working on medical/surgical units at the University of Alberta Hospitals must be able to perform. When the self-assessed performance of newly employed nurses was measured against the required skills, it was found that all of the nurses, regardless of years of experience or type of educational preparation, had deficiencies in skill performance. New graduates generally reported more skill deficiencies than experienced nurses; among the inexperienced nurses, university prepared nurses reported more skill deficiencies than the college or hospital prepared nurses. It was difficult to identify any trends in terms of the ten groups of skills because of the wide variation in the skills which respondents reported that they were unable to perform. The skill deficiencies were scattered throughout the ten groups of skills.

The skill deficiencies reported by the respondents suggests that there is a unique configuration of the learning needs of newly employed nurses at the University of Alberta Hospitals. There is a wide variation in the skill level of newly employed nurses and each nurse has different learning needs. The findings of this investigation support the thesis that a standard orientation program which provides the same information to all nurses is ineffective because of the diversity of learning needs of nurses. A prescribed program is likely to be inadequate, overwhelming or repetitious to participants and methods need to be devised which consider the individual needs of nurses.

Summary

The identification of the learning needs of newly employed nurses at the University of Alberta Hospitals was achieved through the use of the Competency Analysis Profile developed from the Required Competence Profile described in Chapter 3. One hundred newly employed nurses were asked to complete the CAP by indicating those skills which they could perform and the level at which they could perform the skills. The information gathered from this group of nurses completed the data base needed to identify the problem of orientation at the University of Alberta Hospitals.

Based on the analysis of the responses, a diagnosis of the problem was made. Due to the variety of learning needs expressed by nurses, the traditional type orientation program which provides the same information to all nurses is ineffective in helping nurses to function in the required staff nurse role. All newly employed nurses, regardless of experience or preservice preparation, reported deficiences in all of the skill areas. In order to be effective then, orientation efforts must be directed toward meeting the individual needs expressed by nurses.

CHAPTER 5

PROGRAM ALTERNATIVES

According to the problem solving model for planning change, once the relevant information has been analyzed and a diagnosis made, the next step is to select the solution. As Havelock (1979) notes, there is not always one right solution to the problem. The process of choosing involves generating a number of "possibilities" which have been based on an examination of the facts surrounding the problem.

In reviewing the diagnosis and the information from which the diagnosis was based, several implications for developing alternatives are evident. First, the wide variation in the skill level of nurses participating in the study suggests that alternatives need to be flexible in order to accommodate the individual learning needs of nurses. Differences in learning styles and sequencing of learning activities need to be considered here. Next is the notion that adult learners can and should be involved in identifying their own learning needs. This implies that the alternatives proposed should include some mechanism whereby nurses can compare the skills which they possess against the desired competencies. This comparison allows them to determine what they need to learn.

In essence then, there are two features which should be included in any proposed solutions to the problem of orientation at the University of

Alberta Hospitals. These are the individualization of learning and the notion of self assessment of learning needs.

The purpose of this chapter, then, is to review the various orientation approaches which meet one or both of the criteria outlined above. Specifically, three approaches will be discussed. These are Nursing Internship Programs, Special Orientation Units and Clinical Preceptorship Programs. It is recognized that there are other orientation approaches suggested such as Bicultural Training Programs (Kramer & Schmalenberg, 1977), Skill Inventories (Moore & Gram, 1980) and Competency Based Orientation Programs (del Bueno, Barker & Christmyer, 1980). It must be noted, however, that these programs are all modifications or derivatives of the three major programs.

While the major approaches focus specifically on beginning practitioners, they deserve a critical review for two reasons. First, an interview with the nursing recruitment officer at the University of Alberta Hospitals revealed that approximately fifty percent of nurses employed to work in that agency are new graduates. Second, findings of the study reveal that all newly employed nurses, regardless of years of experience, have inadequacies relative to specific employment situations and need initial assistance if they are to function as required in the staff nurse role. It is therefore conceivable that any one of the alternatives to be described could be adopted by the University of Alberta Hospitals, either in their entirety or with suitable modifications.

Nursing Internship Programs

A frequently cited approach to orientation is the internship program which has been defined by Lewison and Gibbons (1980) as a transitional program for new graduate nurses. The concept of an internship period for a beginning professional is not a new one. In the early 1900s, the first recognized internship program for teachers was established at Brown University in Rhode Island (The Association for Student Teaching, 1968). Since that time various forms of internship programs have been developed to provide beginning teachers with experiences of reality in which previously learned knowledge and skills could be integrated in "clinical" practice settings. As well, since the Flexner (1910) report, the medical internship is now an integral part of the educational experience of physicians.

The concept of a nursing internship program, as it is currently understood, was developed in the early 1960s when three health care agencies simultaneously implemented programs to assist new graduates in making the transition from student to graduate nurse (Logsdon, 1968). The originators of the concept perceived the program to be longer, more comprehensive and requiring more supervision than the traditional orientation program (Coco, 1976).

While a variety of terms such as "bridging the gap" or "providing a transitional experience" have been used to describe the purpose of nursing internship programs, all programs seem to share a common goal of providing new graduates with the opportunity to increase their clinical skills and self confidence while making a smooth transition into the required staff role. As well, the programs have been initiated by employing agencies in response to inadequacies of traditional orientation programs (Dennen, 1972), job dissatisfaction and high attrition rates with their concomitant costs (Weiss and Ramsey, 1977), and difficulty in recruiting and retaining clinically competent nursing personnel (Bitgood, 1976).

Structure and Process of Nursing Internship Programs

In their survey of internship programs in the United States, Lewison and Gibbons (1980) indicated that most programs were between two months to six months in length, although there were three that were twelve months long. Some of the programs accepted participants from specific educational settings only. For example, the interagency internship described by Weiss and Ramsey (1977) accepts both college and university graduates. Other programs are designed for either college or university prepared nurses. Still others have a two track system--one for university and hospital trained nurses and another, longer track for college graduates. It is interesting to note that two of the three programs which are twelve months in length are designed for university graduates only, while the third accepts mainly these graduates.

In some institutions, participation in the internship program is mandatory (Dennen, 1972) while in others it is optional (Fleming, Woodcock & Boyd, 1975). In many of the latter situations remuneration is the same for nurses enrolled in the program as for those who are not participating in the program. Service commitment varies with each agency; however published reports do not make it clear whether a time commitment is a prerequisite for participation, or how frequently the commitments are fulfilled.

From the survey conducted by Lewison and Gibbons (1980), it was found that most internship programs follow a fairly standard pattern. Interns attend the general nursing orientation and are then assigned to a medical or surgical unit, under the direct supervision of a clinical instructor. During this initial posting, interns spend several hours a week in classes and seminars.

Near the midpoint of the typical program, interns are rotated to another unit (if the first experience was on a medical unit, the second posting is on a surgical one). Team leading responsibility is included in this experience, and interns are expected to work on all three shifts. In addition, they also have the opportunity to rotate briefly to a specialized area such as the emergency department.

Outcomes of Internship Programs

Generally, the results of most of the internship programs reported in the literature are presented in very positive terms. The following evaluative statement in the Dennen (1972) article is typical of those made by proponents of nursing internship programs.

> The . . . nurse prepared in this manner was able to make more satisfying role changes and was capable of assuming more responsibility for clinical practice sooner than nurses not prepared in this manner. (p. 9)

While all of the reported programs were evaluated in some manner, the process seems generally to have been limited to subjective assessment by the designers and participants of the programs. For example, Ackerman and Baisel (1975) claimed that their internship program produced confident, well prepared staff members in six months, but the criteria and methodology for evaluation were not described.

Some writers did use specific criteria such as attrition rates (Minor and Thompson, 1981) as measures of success, but the degree of the program's effect on tenure was not presented. In some instances too, an attempt was made to compare clinical performance and role transition of interns with those of other new graduates (McGrath and Koewing, 1978) but the sample size was insufficient to permit reliable conclusions.

In all instances, the designers of nursing internship programs cited in the literature reported very positive outcomes from their programs. It must be noted, however, that most programs were subjectively evaluated. Therefore, it is difficult to determine if and how well the stated objectives were met.

Special Orientation Units

Another documented approach to orientation is that of special orientation units. Proponents of this concept claim that it is preferable to other approaches because of its flexibility in individualizing orientation. Orientation units are purported to provide the new employee the opportunity, through supervised practice, to achieve competence as quickly as possible with a minimum of anxiety.

Structure and Process of Special Orientation Units

In the pilot project described by del Bueno and Quaife (1976), newly employed nurses were assigned to one of the designated orientation units, each of which had a full time instructor whose sole responsibility was the orientation of the new staff. Eight was the maximum number of nurses which could be oriented in the same unit at one time, and these nurses were considered to be extranumerary. If more than eight nurses were hired at one time, those with the least clinical experience were given priority in the orientation units. Nurses unable to be initially accommodated in these units were assigned to a similar unit where they were "buddied" with an experienced nurse or supervised by a general inservice instructor. These nurses were brought into the orientation units as soon as possible. Performance expectations were outlined in a written contract which listed the behaviours required of the new employee, and the orientation instructor was responsible for providing any clinical or didactic experiences needed by the new staff member.

The written contract containing the list of expected behaviours had three functions. It was used to assess the skill deficiencies of the nurse, to guide the learning process and to evaluate the nurse's performance. This use of a list of expected behaviours is supported by Harris et al. (1979) who stated that "If needed competencies serve as the basis for . . . training . . . personnel, it is logical that the same competencies should be the basis for evaluating performance" (p. 125). For example, if initiating an intravenous infusion was one of the required competencies, and during the initial assessment of the nurse it was identified that she was unable to perform this skill, then the opportunity was provided for her to learn the skill under the supervision and direction of the instructor. At an agreed on time, the nurse's performance of this skill was then evaluated.

The orientation instructor determined the readiness of a nurse to move to a permanent assignment. At the end of the orientation period, the length of which varied with each nurse, the instructor recommended that the nurse be assigned to a location consistent with her performance capabilities or that her probationary period be extended. Since a salary increase occurred only after successful completion of the probationary period, this became an incentive for the nurse to complete the orientation period as quickly as possible.

Another pilot study was conducted by Peitchinis (1976) to determine if nurses who received assistance in special orientation units would become more competent sooner than nurses participating in the general nursing orientation programs. Among the null hypotheses tested was one which stated that there would be no differences between the competencies demonstrated by nurses due to the type of orientation program which they experienced.

In contrast to the situation described above, the experimental orientation units did not have specific orientation instructors. Instead, there was a project coordinator who was assisted by the head nurses and team leaders of the special orientation units. As well, all regular nursing staff on these units were encouraged to be facilitators of the learning of the new employees.

Nurses in the experimental units performed a self assessment at the beginning of their experience, and all nurses in the control and experimental groups were evaluated by their head nurses at predetermined times during the six months orientation experience. The evaluation tool was the Slater Competency Rating Scale (1967) which includes the physical aspects of patient care.

Outcomes of Special Orientation Units

According to del Bueno and Quaife (1976) there were several demonstrable benefits of their orientation units. A comparison of the attrition rate of nurses participating in the orientation units with those receiving the standard orientation program revealed the turn over rate to be 10% higher among the latter group of nurses. As well, the authors indicated the orientation units were more economical, and also, that they were able to validate the performance of the new nurse employee.

It must be noted that these outcomes, while favourable, were presented primarily in an anecdotal manner with no objectively acquired data to support their claims. In contrast, the Peitchinis study developed testable hypotheses, and the findings of the study revealed that there were no significant differences in the measured competencies of nurses experiencing the various types of orientation programs.

Clinical Preceptorship Programs

The final orientation approach to be discussed is one which the nursing literature reports to be a personalized program of assistance for the graduate nurse. The concept of a clinical preceptorship has been defined as the pairing of a new employee in the clinical setting with a staff nurse, designated as a clinical preceptor (Friesen and Conahan, 1980). As with the internship programs, clinical preceptorship programs focus on the learning needs of the new graduate, and were developed to bridge the gap between the "idealism" of preservice education and the reality of nursing service (Kramer, 1974).

Structure and Process of Clinical Preceptorship Programs

While the preceptorship programs cited in the literature are available to all beginning practitioners, most of the participants appear to be graduates from college programs. The length of the programs varies from two months to six months (McGrath and Koewing, 1978; Friesen and Conahan, 1980). The one exception is the program described by Knauss (1980) which is two weeks in length. In some programs participation is mandatory, while in others participation is encouraged but not required (Hammerstad et al., 1977).

In the reported program, emphasis was placed on the role of the preceptors, and the criteria for the selection of these individuals was fairly standardized among all of the programs. Generally, preceptors were chosen from among existing staff, the one exception being the situation described by McGrath and Koewing (1978) in which instructors were part of the preceptor group. In this case, a one to one relationship was not possible.

The preceptors were expected to be role models, demonstrating exceptional clinical expertise and communication skills. Previous teaching experience was desirable but not necessary since they were assisted with techniques and strategies relative to the teaching of the adult learner. A positive attitude toward the concept and a willingness to work with new staff was essential. The preceptors were responsible for planning the learning experiences of the new staff member, for teaching and for evaluating the clinical performance of the nurse.

The work study experiences of nurses participating in the preceptorship programs appear to follow a typical format. Nurses go through the general nursing orientation and are then assigned to the medical/surgical areas for most of their clinical and classroom experiences. This initial experience involves working all three shifts. In most programs nurses are given the opportunity to work in a limited number of specialty areas. In the situation described by McGrath and Koewing (1978), nurses could not move on to specialized experiences until they had successfully met the performance requirements on the medical/surgical areas.

Outcomes of Clinical Preceptorship Programs

In all situations, comments about the preceptorship programs were elicited from those involved: the new graduates, the preceptors and head nurses. For example, Friesen and Conahan (1980) stated that the nurses and preceptors responded positively toward the program, and that the head nurses indicated that a more complete and individualized orientation had taken place. The authors also reported positive results from an analysis of turnover rates. Objectively obtained data were not presented to support these claims.

McGrath and Koewing (1978) made similar claims concerning their program, but the reader was provided with specific objectives and the evaluation tool. They also identified the various components of the program which had been evaluated, the sources of information and the method of data collection.

The authors were able to objectively demonstrate the benefits of their program. For example, they indicated that the program allowed them to validate the performance of the new graduate. In the first program, four of the twenty nurses were identified as "problems" and it is interesting to note that these nurses later failed their state board examinations. The authors also indicated that their evaluation techniques allowed them to determine the weaknesses of their program and to make needed modifications for future enhancement of the program.

Summary

Included in the process of selecting a change is the generating of alternatives which provide solutions to a defined problem. In this chapter three types of orientation programs were presented as possible solutions to the orientation problem at the University of Alberta Hospitals. These were Internship Programs, Special Orientation Units and Clinical Preceptorship Programs. There were two criteria on which the selection of the alternatives was based. One was the notion of self-assessed learning needs and the other was the individualization of learning experiences to meet the identified need. These criteria were based on implications derived from this study and from a review of the relevant literature.

CHAPTER 6

FEASIBILITY OF THE ALTERNATIVE SOLUTIONS

The feasibility testing of the possible options is seen by writers in organizational change as one of the most crucial tasks involved in choosing a solution. Yet, it is an area which is often poorly managed, even to the point where the critical feasibility questions are not even asked (Havelock, 1979). Although the questions need not all be answered in the affirmative (Havelock, 1979, p. 108), the testing, weighing and comparing of the various factors which could affect the acceptance of an idea are necessary activities to be performed if the best solution and most appropriate implementation strategy is to be found.

The area of greatest concern with the programs described in Chapter 5 centres around the lack of reliable and valid evidence regarding the benefits of the cited programs. As Overton and Stinson (1977) note, the inability to objectively define tangible outcomes of services or programs is a widespread phenomenon in the health care sector. Although criticism can be directed at the evaluative methods used in some of the orientation programs described, nonetheless it appears that many agencies have found acceptable solutions to the problem of employing nurses who lack the required technical skills and clinical competencies.

In this chapter, the orientation alternatives outlined in Chapter 5 are examined in terms of their potential benefits, practicability and diffusibility vis-a-vis the specific situation at the University of Alberta Hospitals. Specific criteria are used to evaluate each alternative, and the chapter concludes with a comparative summary of the three solutions.

Benefits of Nursing Internship Programs

Havelock (1979) outlines several areas which need to be addressed when considering the potential benefits of a possible solution. These include identification of the recipients of the benefits, the number of people who would benefit from the solution, the magnitude of the benefits and any anticipated negative effects of the solution.

Recipients of the Benefits

If one accepts the results of the reported programs, there are several groups at the University of Alberta Hospitals who would benefit from the implementation of an internship program in that institution. First, all beginning practitioners employed to work on the medical/surgical units could gain from this program, since they would be given the opportunity to learn the required skills in a controlled situation and under conditions which take into account their individual learning needs. Based on research findings which demonstrate a relationship between training , competence, job satisfaction and attrition, one could reasonably conclude that with proper assistance, the skill performance of these nurses would improve and their frustrations would diminish. As their competence and confidence increased, the nurses would probably tend to remain longer in the employment of the institution. This increased length of, stay in turn, would be of benefit to Nursing Administration who would have a group of clinically competent nurses able to function as required in the staff nurse role. Of course, the longer the stay of these nurses, the fewer would be the recruitment problems of the administration. Finally, as recipients of the care provided by participants of an internship program, patients at the University of Alberta Hospitals could be assured that these nurses could competently perform the required skills involved in giving care.

How Many Would Benefit

Identification of specific numbers of nurses who would benefit from an internship program cannot be provided since this is a function of the number of new graduates hired, as well as the frequency with which the programs were to be conducted. However, since the Hospital employs over one thousand nurses and since it has been established that approximately one half of these nurses are new graduates, one can conclude that a considerable number of nurses would benefit from the internship program.

Magnitude of Benefits

Apart from the benefits discussed above, there are other possible effects which could magnify the benefits of an internship program at the University of Alberta Hospitals. One of these might be the generation of a feeling of commitment to the institution. When nurses realize that the administration is concerned about their needs and is taking some action to meet these needs, they might be more receptive to, and supportive of, the institution's ongoing and future activities.

An additional benefit of an internship program could be the enhancement of the institution's image in the nursing community. If nurses perceive that they are being given the needed support to learn the required skills, it is conceivable that they would promote the institution as a "good" place to work, a desirable recruitment image. Finally, if a well designed internship program was properly implemented, the information collected would be useful to two concerned groups who presumably have a vested interest in the nursing care provided to Albertans, the nursing educators who prepare nurses, and the Department of Hospitals and Medical Care, who provide funding to hospitals.

In response to the criticism that new graduates are not being prepared to function in the hospital setting, nursing educators state that nursing service departments are not using these nurses in the role for which they are being prepared (Crancer, Fournier & Maury-Hess, 1975). It could be argued that Education's statement regarding Service's use of new graduates may not be a valid one. As Hilliard (1975) points out, many educators do not work enough in the practice setting to remain expert practitioners. If this is so, perhaps these individuals, who interestingly enough do the planning and make the decisions regarding the education of nurses, have an inaccurate picture of the clinical situation and the practice role for which nurses must be prepared. Furthermore, if nursing educators are not expert practitioners, it would be difficult for them to prepare potential graduates with those skills required by hospitals.

In any case, the systematic collection of data from a well designed internship program would enable that hospital to objectively identify for nursing educators those skills required by the Hospital. This in turn would allow Faculties of Nursing to strengthen that component of their programs for which they are being criticized. Also, the collection of objective data, detailing the precise costs of providing the program, might serve to convince the Government of the need for allocating specific funds for nursing orientation programs in Alberta hospitals.

Negative Effects of the Program

It must be remembered that internship programs were created to meet the needs of beginning practitioners only. The implementation of such a program could cause a polarization between new graduates and the experienced group of newly employed nurses not receiving similar support. This in turn could negate most of the additional benefits described above.

Practicability of a Nursing Internship Program

Among the questions posed in Havelock's (1979) model on problem solving are those related to the reliability and validity of evidence regarding the benefits of possible alternatives, the costs involved and the practicability of each alternative for the specific situation at the given point in time.

Reliability and Validity of Evidence

The majority of internship programs reported in the nursing literature have not been objectively evaluated in terms of their stated goals. Typically, evaluations tended to be subjective and in many cases, informal. Even those writers who used specific criteria such as job satisfaction merely stated that this had increased. Either no data were presented to support the claim, or the methodology was such that reliable and valid conclusions could not be drawn. Consequently, if the University of Alberta Hospitals were to consider the internship concept as the orientation alternative, it is suggested that a pilot project be conducted, the design of which should include criteria for objective evaluation of the program. Only with systematic measurement could demonstrable proof of the program's benefits and effectiveness be obtained.

Anticipated Cost of the Program

As noted previously, the need for, and importance of nursing orientation programs in Alberta has not been recognized in terms of specific financial support. Therefore, funding for an internship program would have to come from the Hospital's global budget.

There are basically two types of program costs which can be anticipated and documented: direct and indirect costs (Craig & Nachlas, 1978). Salaries would be a major portion of the direct costs, and the amount of money involved is a function of the number of interns, teaching staff and the length of the program. Assuming that interns are supernumerary, then salaries for replacement nurses must also be identified. Other direct and calculable costs are those related to the development of learning materials, and the use of supplies and equipment for demonstration purposes. The indirect costs are those expenses incurred in providing the program which do not involve direct outlay of money. For example, the use of staff from departments other than nursing who teach in the program, and expenses related to the use of facilities during the didactic portion of the program are all part of indirect or hidden costs.

Another cost factor to be considered is the availability of human resources to plan and implement the program. How many people are needed? How many are available? What skills do they possess? What skills do they need? How will they acquire the needed skills? These and other questions related to the cost-benefit ratio of an internship program need careful consideration.

Practicability of the Program

The question of whether or not an internship program is feasible at the present time can be answered very succinctly: given the current shortage of nurses, it would be impractical at this time for the Hospital to have a program of the length suggested which focuses on only one group of newly employed nurses.

Diffusibility of an Internship Program

The final feasibility measurement suggested by Havelock (1979) is the diffusibility of an idea, that is, the acceptability of a concept to individuals in the organization. Acceptability is in relation to the "fit" or compatability of the idea with commonly held attitudes and values.

Attitudes and Values Affecting Diffusibility of the Program

In the situation at the University of Alberta Hospitals, there are several attitudinal forces which could affect the diffusibility of the internship concept. One of these is what New and Couilliard (1981) call threatened self interest. This attitude includes the belief that a loss of status may occur should a proposed change be implemented. It must be noted that there are two staff development systems in the Hospital, one of which is decentralized. In areas where this system is operating, supervisors have total control over the educational process and are protective of the teaching activities which they have implemented for their staff. Should an internship program be implemented, all activities would need to be centrally coordinated to ensure uniformity of activities and efficiency of operation. These supervisors may be threatened by this and may perceive centralization as loss of control and erosion of their authority over educational concerns.

Another force to be considered is the institutional value placed on cost containment. There are two aspects to this notion. First, if during the planning stage the cost of the program outweighs the perceived benefits, it is doubtful if the Hospital administration could be convinced to financially support the program. Second, the current shortage of nurses is fostering an attitude of "a pair of hands is better than none." Therefore, supervisors who are now responsible and accountable for their budgets, may be reluctant to support a program which appears, not only to be draining an already near-depleted personnel reservoir, but also to require justification of the over-expenditure in their budgets which replacment salaries would undoubtedly create.

While the above discussion has identified what Lewin (1951) calls restraining forces, there are also what he terms pushing forces which are still within the realm of attitudes and values, and which can affect the diffusibility of the internship concept. Supervisors are concerned about the availability of skilled nurses who are needed to provide a high quality of patient care. Although most supervisors would be hard pressed to define "high quality", the frequency with which the term is used leads one to speculate that the concept holds some value for them. Consequently, it is possible that they would welcome any strategy which would help solve the problem of finding nurses who possess the skills needed to provide the desired quality of patient care.

Limited Demonstration of the Program

The final criterion for judging diffusibility is the ease with which an innovation can be tried out so that the results are readily apparent. Rogers (1962) calls this the "divisibility" of the innovation. Does it have to be done in total or can it be tried on a limited basis?

It has been previously stated that an internship program would be impractical at this time. Nevertheless, it would be possible to "pilot" the program using two groups, an experimental and a control group, of interns with no more than five nurses in each group. Conducting the program on a small scale has several advantages. Assuming that the stated objectives were related to the speed of skill acquisition and the retention of staff, it would be possible to demonstrate whether the nurses in the experimental program learned the required skills sooner than those in the control group and whether the former group of interns stayed longer than those in the latter group. Also, conducting the program on a limited basis would ensure the correction of structural and process problems prior to the implementation of the program on a large scale.

If the implementation of an internship program demonstrated that the benefits outweighed the costs, then this would be an effective way, in Lewinian terms, of "unfreezing" some of the "locked in" attitudes and values. Table 6.1 summarizes the negative and positive factors which could affect the acceptability of an internship program at the University of Alberta Hospitals.

Table 6.1

Summary of Influencing Factors Pertaining to an Internship Program

Positive Attributes and Effects	Negative Attributes and Effects
1. Fosters positive image of Hospital	1. Applicable to new graduates only
2. Increases new graduates' support of Hospital's activities	2. Polarization between new graduates and experienced nurses
3. Facilitates improved patient care	3. High cost of salaries
4. Decreases Hospital's recruitment problems	4. No reliable or valid data available
5. Increases supervisory support for a strategy which increases availability of skilled nurses	5. Incompatible with cost containment values
6. Facilitates collection of objective data	6. Fosters attitude of threatened self interest
7. Limited trial possible	7. Impractical at given time

Benefits of a Special Orientation Unit Program

As with the internship program, there are several groups who would benefit from the implementation of special orientation units program at the University of Alberta Hospitals. Participants in the program would acquire the needed skills under optimum learning conditions. These nurses would be supportive of the institution's activities and the institution's image would again be enhanced. As well, the same information collection and dissemination activities would hold true here.

There is, however, one additional benefit to the special units concept, which is that this type of program is not restricted only to the new graduate population. All newly employed nurses can participate in this program which would mean that a greater number of nurses would benefit. This in turn would have a "ripple" effect on the patient care and the administrative benefits. That is, the greater the number of skilled nurses who stay employed longer, the less would be the recruitment problems of administration, and the greater the number of patients who would receive the desired care. Since only certain units are designated as orientation units, the one negative aspect of this program may be that these units might be overburdened with new learners which may have implications for the efficiency of the care provided.

Practicability of Special Orientation Units

The conflicting reports in the nursing literature on special orientation units would suggest that there is yet no reliable or valid evidence regarding the effectiveness of this type of an orientation program. Therefore, if special units were to be considered as an orientation alternative, it is important that evaluative techniques and tools be incorporated into the design of the program in order that objective data regarding the effectiveness of the program can be obtained.

Other aspects of practicability testing include the cost of the program and the feasibility of the program for the specific situation at the given time. With a special orientation unit program similar costs as those anticipated for an internship program would be incurred. However, in terms of the feasibility of special units, a case can be made for the practicality of the program. Since all newly employed nurses can participate in the program, it is possible that some of the experienced nurses may quickly learn the required skills and may then be able to function in the required staff role. Thus, some of the gaps in the nursing establishment would be filled which would make the "shortage" less acute.

Diffusibility of a Special Orientation Unit Program

The same forces affecting the diffusibility of an internship program would be operating in this situation. Supervisors may find centralized coordination of the program threatening, and the same value placed on cost containment would still exist. However, if one assumes that experienced nurses would require less time to function as required, replacement salaries would decrease and there would be fewer occasions in which supervisors would be called on to defend overexpenditures in the budget. Furthermore, since it would be possible to demonstrate some of these benefits through a limited trial of the program, special orientation units may be more readily endorsed as the orientation program of choice. Table 6.2 illustrates the opposing forces which could affect the success of a special orientation unit program.

Table 6.2

Summary of Influencing Factors Pertaining to a Special Orientation Units Program

Positive Attributes and Effects	Negative Attributes and Effects
1. Program applicable to all newly employed nurses	1. Incompatible with cost containment values
2. Enhanced image of the Hospital	2. Fosters attitude of threatened self interest
3. Support given to the Hospital's activities	3. No reliable or valid evidence regarding benefits of program
4. Improved patient care	4. Increased cost in salaries
5. Decreased recruitment problems	
6. Availability of data to convince educators and government	
7. Limited trial possible	
8. Supervisory support for a strategy which would make shortage less acute.	

Benefits of a Clinical Preceptorship Program

The final orientation approach to be analyzed is the preceptorship program, which, like the internship concept, was developed to meet the learning needs of new graduates in the clinical practice setting. However, since this is a personalized program of assistance in which the new employee is paired with a staff nurse, it would be possible to adapt the program to meet the needs of all newly employed nurses. Therefore, the benefits of a preceptorship program would be similar to those of the special orientation unit program. As well, there are additional benefits to be derived from the implementation of a preceptorship program at the University of Alberta Hospital.

At the moment, there are no external rewards at the Hospital for clinically competent nurses who wish to remain as bedside nurses. Generally, if a staff nurse functions exceptionally well in the clinical setting or has university preparation, she is moved vertically into an administrative or teaching position. Consequently, staff nurses do not perceive their role to be of worth and this perception is reinforced each time a competent nurse is "moved up". The use of staff nurses in a clinical preceptorship program would be a tangible way of providing needed recognition to competent nurses. It would be a way of saying that what they do is of value and that they have expertise which only they can share. One could speculate that this recognition would not only foster a positive attitude toward the organization, but might also serve to motivate other nurses to improve their clinical skills.

Practicability of a Preceptorship Program

As stated previously, many agencies involved with preceptorship programs have attempted to objectively evaluate these programs. In writing about their experiences with the concept, McGrath and Koewing (1978) identified the objectives of their program, described the sources from which their data was obtained and provided the reader with their evaluation tools. In presenting their findings, the authors identified the weakness in the various components of their program and also outlined the remedial steps for strengthening the program. So, although the examples of evaluation strategies relative to preceptorship programs are few, there is some objectively acquired data which demonstrates that this is a viable orientation alternative and does produce some of the promised benefits.

The preceptorship program is most acceptable in terms of cost. Since staff nurses do the teaching and supervising of new employees, additional instructors would not need to be hired, which would greatly reduce the cost of the program. Finally, the preceptorship program would be quite practical for the Hospital. The human resources are already available as part of the organization, and as with the special units program, experienced nurses may quickly be able to help alleviate the "shortage" problem.

Diffusibility of a Clinical Preceptorship Program

Although the same attitudinal forces affecting the diffusibility of the other programs still exist here, in this situation their potency would be reduced. Supervisors may still feel threatened by centralized coordination of activities. However, since staff nurses are the preceptors, and since the supervisors know the abilities of their nurses, they would be involved in the selection of the preceptors. Thus participation in the decision-making for the program would give them some control over the situation. As well, cost containment would not be an issue since additional costs in extra salaries would not occur. Finally, it would be possible to demonstrate the effectiveness of the program by implementing it on a limited scale, using two small groups for comparison purposes. Table 6.3 depicts the forces which could affect the success of a clinical preceptorship program.

When comparing the three orientation alternatives in terms of their attributes and effects (see Table 6.4), one obvious conclusion can be made: the preceptorship program has more positive attributes and fewer negative attributes than either the internship or the special unit programs. Therefore, if acceptability of a program is determined by the number of positive attributes and effects of that program, the clinical perceptorship is the orientation program of choice.

Table 6.3

Summary of Influencing Factors Pertaining to a Clinical Preceptorship Program

Positive Attributes and Effects	Negative Attributes and Effects
1. Program applicable to all newly employed nurses	1. Cost containment still exists but less of an issue
2. Foster enhanced image of the Hospital	2. Threatened self interest still exists but in reduced form
3. Support given to the Hospital's activities	
4. Improved patient care	
5. Decreased recruitment problems	
6. Availability of data to convince educators and government	
7. Supervisory support for a strategy which would reduce nursing shortage	
8. Mechanism for giving recognition to clinically competent nurses	
9. Availability of some reliable and valid evidence regarding benefits	
10. Limited trial possible	

Table 6.4

Comparison of the Orientation Programs

	Internship	Special Units	Clinical Preceptorship
Positive Attributes and Effects			
Applicable to all newly employed nurses	-	x	x
Fosters enhanced image of Hospital	x	x	x
Increases staff support of Hospital's activities	xx	x	x
Facilitates improved patient care	x	x	x
Decreases Hospital's recruitment problems	x	x	x
Availability of objectively obtained data to convince education and government	x	x	x
Limited trial possible	x	x	x
Increases supervisory support for a strategy which ensures availability of skilled nurses	x	x	x
Provides a mechanism for giving recognition to clinically competent nurses	-	-	x
Availability of some reliable and valid evidence regarding benefits	-	-	x

Table 6.4 (continued)

	Internship	Special Units	Clinical Preceptorship
Negative Attributes and Effects			
Applicable to new graduates only	x	-	-
Causes polarization between new graduates and experienced nurses	x	-	-
Costly in salaries	x	x	-
No reliable or valid data available	x	x	-
Impractical solution at present	x	-	-
Fosters attitude of threatened self interest	x	x	decreased
Incompatible with cost containment values	x	x	decreased

Recommended Solution

The comparative analysis described above was derived mainly from the literature. In order to test feasibility in relation to the specific circumstances of the University of Alberta Hospitals, input was sought from the nursing supervisors responsible for the medical/surgical units at the University of Alberta Hospitals. These individuals had participated in the data collecting procedures and therefore had an understanding of the intent of the study. In addition, the supervisors possessed administrative knowledge and experience which would allow them to determine the practical implications of the proposed programs.

The process engaged in with the supervisors was a simple one; discussion leading to consensus regarding the most acceptable orientation strategy. This approach was used mainly because of time constraints which would have prevented supervisors from participating in a complex feasibility testing system, and also because a group discussion would involve supervision in aspects of the problem solving process.

A meeting was arranged with the medical/surgical supervisors at which time the various components of the three programs were outlined. The group was invited to discuss the feasibility of the proposed alternatives. The debate among the supervisors centered around the issue of cost of the programs. It was agreed that a program which focused on new graduates only would not be cost effective since other means would still be required to meet the orientation needs of newly hired, experienced nurses. There was also agreement that the employment of additional teaching staff, which the internship and orientation unit programs would require, would not be financially possible at this time.

The preceptorship program was seen to be the most acceptable in terms of cost. In addition, there was consensus among the supervisors that the use of preceptors would be a way of giving recognition to those nurses who were expert practitioners and who wished to remain as bedside nurses. Based on the analysis of the three programs and on the agreement among medical/surgical supervisors, the clinical perceptorship program is the orientation program recommended for implementation on the medical/surgical units of University of Alberta Hospitals.

Summary

Within the framework of the problem solving model are certain conditions which must be met if a rational decision is to be made. Among these conditions is the availability of a number of possible alternative solutions, obtained either from similar situations or through constructive thinking. However, having access to a body of practices that are capable of solving a problem or correcting a situation is not enough. The alternatives need to be examined and evaluated against given criteria.

The purpose of this chapter was to examine the three major types of orientation programs which could be instituted at the University of Alberta Hospitals. Each program was qualitatively analyzed using Havelock's feasibility criteria of benefits, practicability and feasibility. No attempt was made to quantify or "weight" each criterion. However, if the probability of success of a program is based on the number of positive attributes and effects which can be ascribed to that program, then a clinical preceptorship program would have the greatest possibility of success. Based on the agreement among the medical/surgical supervisors, and on the analysis of the three programs, a clinical preceptorship program should be selected for implementation at the University of Alberta Hospitals.

CHAPTER 7

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

Traditional orientation programs are failing to meet the learning needs of newly employed nurses in the hospital setting. Specific criticism of the programs has focused on the lack of documentation of the individual learning needs of nurses and lack of attention to adult learning principles during the orientation process.

The purpose of this study was to develop a planned change strategy for addressing the problem of providing an effective orientation program for nurses newly hired to work on medical/surgical units at the University of Alberta Hospitals. The specific objectives of the study were to:

1. develop an instrument which could be used to determine the basic manual nursing skills necessary for nurses to function on medical/surgical units,
2. identify, by using this instrument, the self-assessed learning needs of newly employed nurses, and
3. propose a strategy for developing a more effective orientation program for newly employed nurses based on these identified needs and on the findings from the literature.

In keeping with the problem solving model for planning change, information was collected and analyzed which led to a diagnosis of the problem. The gathering of data was done in two phases.

In phase one an instrument was developed which was used to determine the manual nursing skills required on the medical/surgical units. This instrument was based on the R.N.A.B.C.'s document Essential Manual Skills of a New Graduate. The skills contained in this document were modified and then validated by nurses working on the medical/surgical units. The Required Competency Profile thus developed contained the skills and the performance level identified by practicing experts as essential for nurses working on medical/surgical units.

In phase two the Competency Analysis Profile, developed from the Required Competency Profile, was used to identify the self-diagnosed learning needs of nurses. One hundred newly employed nurses were asked to complete the CAP by indicating those skills which they could perform at the required level. When the self-diagnosed performance of the nurses was measured against the required skills, it was found that the respondents, regardless of years of nursing experience or type of preservice preparation, all reported some deficiencies in all of the ten competency areas. Analysis of responses revealed a wide variation in the type of skills and the number of skills which respondents reported that they were unable to perform.

After the diagnosis of the problem was made, a number of possible solutions were generated. These were Nursing Internship Programs, Special Orientation Units and Clinical Preceptorship Programs. There were two criteria on which these "possibilities" were based. One was the concept of self-assessed learning needs and the other was the individualization of learning experiences to meet identified needs. These criteria were based on implications derived from the findings of the study and from a review of the literature.

Each alternative generated was then examined in terms of their benefits, practicability and diffusibility vis-à-vis the specific situation. Based on the analyses of the alternatives and in consultation with selected nursing supervisors, the Clinical Preceptorship Program was chosen as the most acceptable orientation strategy.

Conclusions

The process of developing the diagnostic instrumentation is an important one since it demonstrates that there are indeed basic manual nursing skills required on medical/surgical units, and further, that nurses working on these units can identify the required skills. Although the findings of the study apply specifically to the University of Alberta Hospitals, other hospitals in the province may find it useful to engage in a similar process and develop their own profile of required skills.

By specifying nursing responsibilities in terms of required competencies and required level of performance, the institution identifies to the new employee the performance expectations vis-à-vis skill requirements. New employees can thus assess their individual learning needs, which follows Knowles' theory of adult learning. The competency profiles will also benefit unit supervisors who can assign patients to new staff based on the nurses' identified skill abilities.

This serves to capitalize on the strengths of the new employees and assists in decreasing the frustration of being expected to perform tasks for which they are not prepared, a situation which the literature suggests can lead to job dissatisfaction and resignation. The profile can also serve as an evaluation tool which unit supervisors can use to determine progress of staff in developing their skills and in attaining the level of competency required by the organization.

The results of the study showed that there were some differences in the skill requirements of the medical/surgical units. This means that the orientation needs of nurses employed to work on these units would vary to some degree. In spite of these differences, there are skills common to all areas and it can be speculated that this commonality extends even to "specialty units". This suggests that a coordination of efforts is needed to prevent costly duplication of program planning and teaching of skills.

All of the respondents, regardless of years of experience or type of preparation, reported some difficulties in all of the ten competency areas, and each nurse reported different deficiences. This suggests that some nurses require a great deal of support, while others would need only minimal assistance.

If an orientation program is to effectively meet the varying needs of new employees, these individuals must be asssisted in identifying their own learning needs. These needs must then be met in a way which considers the individual learner. Information must be appropriately sequenced so that the new employee develops confidence in performing simple skills before becoming involved in more complex ones. As suggested in the literature, the type of program in which all of the required information is given to all nurses during the beginning days of employment only adds to the anxiety and frustration of the nurse. This is particularly true for new graduates who are already experiencing reality shock.

With specific skills and specific groups of skills, marked differences could be seen between nurses from different educational backgrounds. Nurses educated in hospital programs reported that they were more able to perform the required skills than those educated in a college or university program. There appeared to be significant difference in the mean number of skills which inexperienced nurses from different educational backgrounds could not perform. This area requires further study but the findings suggest that student nurses need to gain additional clinical experience in performing some of the basic nursing skills. This has implications for nursing education. Administrators of nursing education programs who are in the process of modifying the length of their programs must ensure that there is sufficient time in the programs to allow students to practice these very vital skills in the clinical setting.

Regardless of experience there was no significant difference in the mean number of skills which could not be performed by the nurses. This seemed surprising, but perhaps demonstrates that as nurses gain experience they tend to become specialized and perhaps perceive that they are unable to carry out some of the basic procedures which they have not performed for some time. This has implications for the employing hospital who should not assume that the nurse has all the skills necessary for her specific job just because she has several years of experience. The type of experience is also important.

Recommendations

The following recommendations are based on the findings of the study and on a review of the literature, and apply specifically to the University of Alberta Hospitals.

Recommendation #1: A competency profile development program for basic manual nursing skills should be initiated, starting on the medical/surgical units. Profiles should be developed for individual units. Once the program is well established on the medical/surgical units, it is suggested that all units in the institution become involved in developing and maintaining unit-specific competency profiles. Since skills may change over time, reviewing and modifying the profiles are important activities if they are to be useful assessment and evaluation tools.

The institution may wish to extend the program to include other competency areas in which nurses must be proficient. Should this occur, it is suggested that the additional skills be "phased in". For example, team leading skills should precede communication skills. This is not to imply that team leading is a more important area than communication. Rather, it suggests that the former skills are more readily identified and therefore easier to evaluate.

Recommendation #2: The Inservice Department should assume responsibility for ensuring that newly employed nurses become proficient in performing those skills which the majority of respondents could not perform. There were three skills which many respondents reported that they could not perform. These were cardiopulmonary resuscitation, initiating and monitoring intravenous infusions, and using fire extinguishers. It is suggested that all newly employed nurses participate in a formal CPR certification program. It is further suggested that the Inservice Department conduct bi-annual CPR reviews to ensure that all nursing personnel maintain competence in this area. A similar certification and review procedure should be developed for intravenous therapy. In addition, the Department should work with the Personnel office to ensure that initial and ongoing practice sessions are available for nurses in using fire extinguishers.

Recommendation #3: The concept of clinical preceptorship should be considered as a means of meeting the individual learning needs of newly employed nurses. If this orientation strategy were to be adopted, it is recommended that the program be developed in as much detail as possible prior to its implementation. Attention would need to be given to items such as the training of preceptors; development of tools for evaluating the various components of the program; and identification of performance requirements and levels of performance. In addition, it is suggested that the program be initially introduced on one or two selected units. This limited trial would ensure that needed modifications are made before the program is implemented on a large scale.

Recommentation #4: Further study should be done to validate the perceptions of newly employed nurses in relation to their abilities to perform the required manual skills. The process of self-diagnosis engaged by the respondents was in fact a matter of their perceptions of their abilities or inabilities to perform the required skills. Further study may reveal that inconsistencies exist between self-perceived performance abilities and observed performance abilities.

In addition to the above specific recommendations, it is suggested that:

1. Faculties of Nursing strengthen the skills preparation of their students so that new graduates are able to function at a basic level of competence. Faculties who have or are considering shortening their nursing programs must ensure that their students have the opportunity to learn the essential manual skills.
2. Faculties of Nursing seek input from nursing practice experts in hospitals regarding the skill requirements of these employing agencies.
3. Collaboration between nursing education and nursing practice continue in order that strategies can be identified for reducing the education-practice gap.
4. The Alberta Association of Registered Nurses encourage hospitals throughout the province to identify the basic skills required by nurses working in these institutions, and further, that the Association become involved in the coordination of these identification procedures in order to compile a document such as Essential Manual Skills of the New Graduate developed by the R.N.A.B.C.
5. The Alberta Association of Registered Nurses encourage and collaborate with nursing educators in utilizing the document so

developed to ensure that all new graduates can function at a beginning level of competence relative to the skills contained in the document.

6. Faculties of Nursing encourage students to work in hospital settings during the summer in order to gain additional clinical experience.
7. Faculties of Nursing recognize that nursing indeed is a clinically based profession and the ability to perform manual skills while caring for patients is mandatory for safe and effective patient care.

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APPENDICES

APPENDIX A

SKILLS ELIMINATED FROM R.N.A.B.C. DOCUMENT ESSENTIAL SKILLS OF A NEW GRADUATE

APPENDIX A

SKILLS ELIMINATED FROM R.N.A.B.C. DOCUMENT ESSENTIAL MANUAL SKILLS FOR NEW GRADUATE

Time contractions

Palpate fundus

Take fetal heart rate

Assess breast engorgement

Do physical examination of newborn

Do breast examination

Do post partem breast care

Bath babies

Change diapers

Care for cord

Feed infants

Massage fundus

Assist with circumcision

Assist with delivery of baby

Pick up and carry infants

APPENDIX B

ESSENTIAL MANUAL SKILLS FOR NEWLY EMPLOYED NURSES

University of Alberta Hospital

Profile of Essential Manual Skills for Newly Employed Nurses

A. ADMINISTER PERSONAL HYGIENE

Skill	Suggested Specifications	Essential/Nonessential		Level of Performance		
A-1 Give complete bed bath		E	N	1	2	3
A-2 Assist with tub bath or shower		E	N	1	2	3
A-3 Give oral hygiene	- observe condition of mouth - assist patient as necessary to clean mouth and teeth - lubricate as required	E	N	1	2	3
A-4 Care for dentures	- remove dentures and clean - provide oral hygiene - replace dentures or store in labelled container in a safe place	E	N	1	2	3
A-5 Give eye care	- observe condition of patient's eyes - remove contact lenses if required - cleanse eyes or irrigate as necessary - provide for lubrication as required - apply patch if indicated	E	N	1	2	3
A-6 Remove prosthetic eye	- place prosthesis in labelled receptacle - observe condition of socket and cleanse as necessary reinsert prosthesis	E	N	1	2	3
A-7 Give care to nose	- observe condition of nose - cleanse and lubricate nose as indicated	E	N	1	2	3

Skill	Suggested Specifications	Essential/Nonessential		Level of Performance		
A-8 Give care to ears	- observe ears - cleanse as required	E	N	1	2	3
A-9 Care for hearing aid	- clean aid - keep in "off" position when not in use - keep in labelled receptacle - adjust volume as necessary	E	N	1	2	3
A-10 Shampoo, comb and brush hair		E	N	1	2	3
A-11 Give perineal care		E	N	1	2	3
A-12 Care for feet, hands and nails		E	N	1	2	3
A-13 Give facial shave		E	N	1	2	3
A-14 Dress and undress patient		E	N	1	2	3
A-15 Change gown of patient with I.V.		E	N	1	2	3
A-16 Give bedpans and urinals	- provide for hygienic measures	E	N	1	2	3

B. PROVIDE COMFORT MEASURES

Skill	Suggested Specifications	Essential/Nonessential		Level of Performance		
B-1 Make and change beds		E	N	1	2	3
B-2 Give back rub		E	N	1	2	3
B-3 Give special skin care to pressure areas		E	N	1	2	3
B-4 Position patient to maintain good body alignment		E	N	1	2	3
B-5 Physically comfort patient	- touch, pat, hold as indicated	E	N	1	2	3
B-6 Provide aesthetic environment for patient	- organize equipment and personal belongings to meet patient needs - maintain tidy environment and remove unnecessary equipment - promote freshness of air - maintain room temperature to meet patient's needs - adjust lighting as appropriate - ensure that call cord is within reach	E	N	1	2	3

C. AMBULATE AND TRANSPORT PATIENTS

Skill	Suggested Specifications	Essential/Nonessential		Level of Performance		
C-1 Transfer from bed to chair	- use good body mechanics - restrain as necessary	E	N	1	2	3
C-2 Transfer from bed to stretcher	- secure stretcher - assist patient to transfer, or - use 3-man lift, or - use transfer sheet - position and restrain	E	N	1	2	3
C-3 Use patient lift	- position patient and place slings - move as indicated	E	N	1	2	3
C-4 Transport via bed, stretcher, wheelchair	- position and restrain for safety and comfort	E	N	1	2	3
C-5 Give active and passive exercises	- ensure continuity as indicated	E	N	1	2	3
C-6 Assist patient to walk, sit, stand	- provide adequate support - maintain good body mechanics	E	N	1	2	3
C-7 Assist patient to turn in bed	- place pillows to maintain position as required	E	N	1	2	3
C-8 Assist with use of walker		E	N	1	2	3
C-9 Instruct patient in crutch walking	- measure for crutches - assist with learning appropriate gait - assist with ascending and descending stairs	E	N	1	2	3

Skill	Suggested Specifications	Essential/Nonessential	Level of Performance
C-10 Practice good body mechanics	- push, pull, lift, turn and bend while maintaining a broad base of support, good balance and alignment, proper weight distribution and centre of gravity	E N	1 2 3

D. CARRY OUT PHYSICAL ASSESSMENT TECHNIQUES

Skill	Suggested Specifications	Essential/Nonessential	Level of Performance
D-1 Take vital signs	- measure temperature by oral, axilla, or rectal routes - measure pulse rate and note character (strength, regularity) - count respirations and note character - measure systolic and diastolic blood pressure	E N	1 2 3
D-2 Take apical heart rate	- check radial and apical rates simultaneously if applicable - note character of apical pulse	E N	1 2 3
D-3 Do neurological assessment	- determine state of alertness - determine orientation - observe both pupils simultaneously for equality of size and shape - observe direct pupillary light reflexes - observe consensual pupillary reflex - observe facial symmetry - check handgrips - check movement and strength of extremities - check sensation	E N	1 2 3
D-4 Assess tissue turgor	- observe and palpate skin in appropriate areas	E N	1 2 3
D-5 Auscultate for breath sounds	- position stethoscope - listen for air entry in all areas of the lungs - observe chest movement	E N	1 2 3

Skill	Suggested Specifications	Essential/Nonessential		Level of Performance		
D-6 Auscultate for bowel sounds	- position stethoscope - determine presence or absence of bowel sounds	E	N	1	2	3
D-7 Palpate for abdominal distention		E	N	1	2	3
D-8 Measure height (in cm) and weight (in kg)		E	N	1	2	3
D-9 Assess drainage, discharge, flow	- measure amount if drainage flows into a container - estimate amount visually - check color, odor, consistency, contents - use aseptic technique as appropriate in handling both drainage mode and drainage material - disassemble and reassemble drainage mode correctly if applicable	E	N	1	2	3

E. MAINTAIN FLUID AND NUTRITIONAL BALANCE

Skill	Suggested Specifications	Essential/Nonessential		Level of Performance		
E-1 Prepare patient for meals		E	N	1	2	3
E-2 Feed patient		E	N	1	2	3
E-3 Gavage patient	- prepare appropriate feeding - check that tube is in stomach - aspirate contents and measure (reinsert prior to feeding) - give feeding, adjusting volume as indicated - clear tube with water - maintain semi-Fowlers position for minimum of 30 minutes	E	N	1	2	3
E-4 Maintain I.V.'s	- evaluate whether I.V. functioning and take action as per hospital procedure - replace solution bag as indicated and prescribed - change tubing as per hospital procedure	E	N	1	2	3
E-5 Measure intake and output		E	N	1	2	3

F. CARRY OUT ASEPTIC TECHNIQUES

Skill	Suggested Specifications	Essential/Nonessential	Level of Performance
F-1 Put on sterile gloves		E N	1 2 3
F-2 Set up and add to sterile field	- establish sterile field - add equipment using forceps, gloved hand as appropriate - unwrap sterile supplies - pour sterile solutions - rewrap sterile supplies	E N	1 2 3
F-3 Change dressings	- cleanse area using principles of sterile technique (e.g. 'clean to dirty')	E N	1 2 3
F-4 Shorten or remove drains	- withdraw length specified in written order - secure with pin before cutting	E N	1 2 3
F-5 Insert superficial wound packing		E N	1 2 3
F-6 Remove packing from superficial wound	- (in Division of Urology, removal of wound packing is responsibility of medical staff)	E N	1 2 3
F-7 Remove sutures	- includes skin sutures (except in orthopedic cases) - does not include retention sutures, wire sutures, continuous skin sutures nor subcuticular sutures	E N	1 2 3

Skill	Suggested Specifications	Essential/Nonessential	Level of Performance
F-8 Irrigate wounds	- cleanse wound - assess wound - insert catheter; do not force if resistance is met - instill solution and allow to return before repeating	E N	1 2 3
F-9 Debride wound		E N	1 2 3
F-10 Apply sterile compresses		E N	1 2 3
F-11 Give Sitz bath	- immerse from mid-thigh to iliac crest	E N	1 2 3
F-12 Give tracheotomy care	- auscultate - suction if necessary - give oxygen as per order - instill normal saline as prescribed - insert catheter prescribed distance and establish suction - withdraw catheter in rotating manner - auscultate chest - repeat as necessary - give oxygen - remove, clean and replace inner cannula (Jackson only) as per procedure - change dressing and cleanse area with appropriate solution - change ties as required	E N	1 2 3

Skill	Suggested Specifications	Essential/Nonessential	Level of Performance
F-13 Insert and remove urethral catheter for female patient	- glove and drape - cleanse area around meatus - lubricate and insert catheter - if indwelling, assess function and position, and inflate balloon, attach and secure tubing - assess return - in removal, deflate balloon of indwelling catheter - withdraw catheter in rotating manner	E N	1 2 3
F-14 Give catheter care	- cleanse around meatus and catheter - secure catheter and tubing - ensure that receptacle is kept below bladder level - maintain integrity and asepsis of drainage system	E N	1 2 3
F-15 Give catheter care	- cleanse around meatus and catheter - secure catheter and tubing - ensure that receptacle is kept below bladder level - maintain integrity and asepsis of drainage system	E N	1 2 3
F-16 Irrigate bladder	- cleanse junction of catheter and tubing before disconnecting - using syringe, instill solution into catheter - assess patency, if blocked use gentle pressure - seek assistance if blockage persists - allow solution to drain before repeating - assess return	E N	1 2 3
F-17 Set up and monitor intermittent or continuous bladder irrigation	- monitor bladder intake and output - maintain integrity and asepsis of drainage system - assess return	E N	1 2 3

G. CARRY OUT OTHER PROCEDURES

Skill	Suggested Specifications	Essential/Nonessential	Level of Performance
G-1 Wash hands	- utilize mechanical and chemical means to cleanse hands - procede from fingertips upwards - dry thoroughly in same sequence - turn off tap using paper towel	E N	1 2 3
G-2 Apply heat	- attend to precautions: - positioning source of heat - temperature control - note time treatment commenced - note patient's sensitivity to heat	E N	1 2 3
G-3 Apply cold	- attend to precautions in positioning source of cold with regard to skin protection - note patient's sensitivity to cold	E N	1 2 3
G-4 Sponge to reduce temperature	- check patient's temperature before and after sponging	E N	1 2 3
G-5 Administer oxygen by mask, nasal catheter, nasal cannula	- apply delivery device to ensure comfort and adequate delivery of oxygen - check O_2 flow to give at prescribed rate	E N	1 2 3
G-6 Insert and remove oral airway		E N	1 2 3

Skill	Suggested Specifications	Essential/Nonessential	Level of Performance

G-7 Do cardiopulmonary resuscitation	- determine patient response
	- summon help
	- position patient
	- open airway
	- assess respiration
	- give 4 quick breaths
	- check carotid pulse
	- position hands on chest and commence compression and ventilation:
	  - 15:2 (one person)
	  - 5:1 (two people)
	- continue until arrival of relief and assistance
		E N	1 2 3

G-8 Administer intermittent positive pressure breathing	- attach patient administration unit to machine - insert medication and fluid as required - attach machine to oxygen source - adjust gauges and dials as prescribed - clean patient administration unit	E N	1 2 3
G-9 Suction nasopharyngeal passages	- check suction strength - suction passages using intermittent suction	E N	1 2 3
G-10 Assist patient who is vomiting	- position patient to keep airway as clear as possible - provide mouth care	E N	1 2 3

G-11 Assist patient who is choking	- assess airway; if blocked, institute emergency measures:
	  - summon assistance
	  - apply sudden pressure below sternum (Heimlich manoeuver)
	- suction
		E N	1 2 3

Skill	Suggested Specifications	Essential/Nonessential	Level of Performance
G-12 Assist with coughing and deep breathing	- auscultate for breath sounds - instruct to breath deeply and cough - splint abdominal or thoracic incisions firmly - auscultate for breath sounds on conclusion	E N	1 2 3
G-13 Administer cold nebulization	- attach patient administration unit to machine - fill bottle to correct level with nebulization mixture - attach machine to wall outlet - clean patient administration unit	E N	1 2 3
G-14 Assist with postural drainage	- auscultate for breath sounds - position patient for adequate drainage - follow with deep breathing and coughing - auscultate for breath sounds	E N	1 2 3
G-15 Collect sputum specimen	- assist patient as required: - ensure adequate specimen with deep breathing and coughing or suctioning - care for specimen appropriately	E N	1 2 3
G-16 Do shave preparation	- shave appropriate area - check area with light	E N	1 2 3
G-17 Do skin preparation	- apply solution ordered to appropriate area in proper sequence - if a sterile skin prep, use aseptic technique - check skin for irritation	E N	1 2 3

Skill	Suggested Specifications	Essential/Nonessential	Level of Performance
G-18 Insert nasogastric tubes	- determine correct length for insertion and mark tube - lubricate - insert tube while patient hyperextends neck - check for correct location of tube - secure tube in position	E N	1 2 3
G-19 Irrigate nasogastric tubes (levine, or Salem sump double-lumened tube)	- disconnect suction - check position of tube by aspirating gastric contents - instill saline and withdraw gently - repeat until tube drains freely - reconnect to suction	E N	1 2 3
G-20 Remove nasogastric tubes	- free tube - pinch/clamp tube - withdraw tube - give mouth and nose care	E N	1 2 3
G-21 Irrigate gastric and	- disconnect from suction if necessary - instill solution and withdraw gently - repeat as necessary - Reconnection suction if appropriate	E N	1 2 3
G-22 Insert rectal tubes	- lubricate and insert tube	E N	1 2 3
G-23 Give enemas	- prepare correct amount of solution at correct temperature - lubricate rectal tube - administer solution as tolerated by patient - observe results	E N	1 2 3
G-24 Disimpact feces	- lubricate glove - continue as tolerated or feces removed	E N	1 2 3

Skill	Suggested Specifications	Essential/Nonessential	Level of Performance
G-25 Care for ostomies	- expose stoma and cleanse as indicated - observe skin and stoma - measure drainage as required - clean re-usuable equipment and prepare appliance - prepare skin and apply appliance - irrigate colostomy if required	E N	1 2 3
G-26 Give douches	- cleanse area - administer as tolerated - observe return	E N	1 2 3
G-27 Test urine for glucose, acetone, protein	- obtain specimen - test as indicated and observe result	E N	1 2 3
G-28 Strain urine	- pour urine through strainer and observe - collect specimen of strained matter if indicated	E N	1 2 3
G-29 Apply condom drainage device	- cleanse area - apply condom and ensure adherence - connect drainage system	E N	1 2 3
G-30 Collect urine and stool specimens	- cleanse area if indicated for specimen required - label specimen and store appropriately	E N	1 2 3
G-31 Take swabs	- expose area and obtain adequate uncontaminated specimen - label and store appropriately	E N	1 2 3
G-32 Care for tissue specimen	- place in appropriate container and label - store appropriately	E N	1 2 3
G-33 Empty and reactivate hemovacs	- open drain plug, and drain contents - compress pump with hand - close drain plug while compressed	E N	1 2 3

Skill	Suggested Specifications	Essential/Nonessential	Level of Performance
G-34 Apply abdominal and T-binders		E N	1 2 3
G-35 Apply anti-embolic stockings and tensor bandages	- apply smoothly, in a distal to approximal direction - check circulation	E N	1 2 3
G-36 Do stump bandaging	- observe condition of suture line - use no circular turns - apply pressure distally to stump	E N	1 2 3
G-37 Apply slings		E N	1 2 3
G-38 Apply rehabilitative splints	- observe for pressure points - observe whether purpose of splint is being met	E N	1 2 3
G-39 Care for casts	- position to promote drying - check color, sensation, temperature, movement and size of distal appendages - observe for oozing from cast and mark - elevate cast if not contraindicated - check for pressure points - protect dry cast from wetness and damage	E N	1 2 3
G-40 Apply skin traction	- take care to apply smoothly - avoid pressure over peroneal nerve and Achilles tendon	E N	1 2 3
G-41 Apply pelvic traction using pelvic belt		E N	1 2 3

Skill	Suggested Specifications	Essential/Nonessential	Level of Performance
G-42 Maintain traction	- maintain body alignment - assure that weights hang freely - assure that knots are secure - assure that pulleys and ropes are positioned properly - maintain skin integrity and circulation - observe pin insertion sites	E N	1 2 3
G-43 -Apply restraints	- include armboards, safety mitts, restraint jackets, wrist restraints - note pressure points - check for circulation	E N	1 2 3
G-44 Remove dangerous objects from patient	- utilize communication skills for voluntary release of dangerous objects - obtain adequate assistance - take measures to protect self and patient using minimal force	E N	1 2 3
G-45 Carry out isolation techniques	- assemble equipment as indicated - prepare and dress appropriately - maintain technique throughout care of patient - prepare and remove equipment, linen, garbage as per hospital procedure - wash hands, disrobe, wash hands	E N	1 2 3
G-46 Care for body after death	- obtain official pronouncement of death - disconnect and remove equipment - position body and replace prostheses - give additional care for body as required (partial bed bath) etc. - care for valuables	E N	1 2 3

H. ADMINISTER MEDICATIONS

Skill	Suggested Specifications	Essential/Nonessential	Level of Performance
H-1 Prepare medication for administration	- use medication card to verify time, medication, dosage, route, patient - prepare according to directions - check labels sufficiently	E N	1 2 3
H-2 Give oral medications	- prepare medication as prescribed - identify patient - give medication with appropriate fluid - ensure that medication taken	E N	1 2 3
H-3 Give intramuscular, subcutaneous or intradermal injections	- prepare parenteral medications - select appropriate needle - select appropriate site	E N	1 2 3
H-4 Prepare and give different types of insulin		E N	1 2 3
H-5 Administer I.V. medication into I.V. solution bag or Buretrol	- prepare medication - assess function of established I.V. - administer medication into solution bag or Buretrol	E N	1 2 3
H-6 Administer medication by inhalation	- prepare medication - administer through inhalation equipment	E N	1 2 3
H-7 Instill eye drops and ointments		E N	1 2 3

Skill	Suggested Specifications	Essential/Nonessential		Level of Performance		
H-8 Instill nose and ear drops and ointments		E	N	1	2	3
H-9 Apply topical medication		E	N	1	2	3
H-10 Insert suppositories		E	N	1	2	3
H-11 Give medicated baths and shampoos		E	N	1	2	3

I. ASSIST WITH DIAGNOSTIC AND THERAPEUTIC MEASURES

Skill	Suggested Specifications	Essential/Nonessential		Level of Performance		
I-1 Assist with abdominal paracentesis	- have patient void - collect drainage in container and/or specimen tubes - care for specimens - apply dressing - check vital signs	E	N	1	2	3
I-2 Assist with joint aspiration and/or injection	- care for specimens - apply dressing and tensor if required	E	N	1	2	3
I-3 Assist with lumbar puncture	- assist patient to maintain position - care for specimens - instruct patient to remain flat if ordered	E	N	1	2	3
I-4 Assist with thoracentesis	- encourage patient not to cough - care for specimens - apply dressing	E	N	1	2	3
I-5 Assist with pelvic examination	- have patient void - assist with pap smear, taking swabs	E	N	1	2	3
I-6 Assist with cutdowns		E	N	1	2	3
I-7 Assist with application and removal of casts		E	N	1	2	3

J. OPERATE AND CARE FOR EQUIPMENT

	Skill	Suggested Specifications	Essential/Nonessential		Level of Performance		
J-1	Manipulate beds, stretchers, and wheelchairs	- manipulate all functional parts of beds, siderails, stretchers, and wheelchairs - apply and release brakes	E	N	1	2	3
J-2	Manipulate specialized beds (Stryker frame, Circo-lectric bed)	- turn, adjust and move beds - observe safety precautions	E	N	1	2	3
J-3	Use footboards and bedcradles	- pad as necessary	E	N	1	2	3
J-4	Operate alternating pressure mattresses	- apply or remove mattress - inflate or deflate	E	N	1	2	3
J-5	Use hot and cold humifi fiers	- add water, ice as indicated - attach to outlet	E	N	1	2	3
J-6	Operate wall suction equipment	- attach bottle to vacuum outlet - adjust to desired suction - attach tubing as necessary	E	N	1	2	3
J-7	Operate Wangenstein gastric suction equipment	- set at low suction unless otherwise ordered	E	N	1	2	3
J-8	Operate Gomco thoracic suction	- maintain water level at desired suction - ensure that drainage outlet remains under water at all times - leave two kelly forceps available for clamping tubing if necessary - maintain a closed system	E	N	1	2	3

Skill	Suggested Specifications	Essential/Nonessential	Level of Performance
J-9 Operate fire extinguishers	- remove extinguisher from wall - remove pin - activate spray and aim at base of fire - reactivate spray	E N	1 2 3
J-10 Operate autoclave		E N	1 2 3

APPENDIX C

COMMENTS ELICITED FROM INSERVICE INSTRUCTORS

APPENDIX C

COMMENTS ELICITED FROM INSERVICE INSTRUCTORS

1. Format
    a. re-grouping of related skills might make for better organization of the paper
2. Performance Level
    a. a three-level scale could be used to indicate level of performance, since it is difficult to differentiate between Levels 1 and 2
    b. in Level 4 the word "constant" supervision is unrealistic. Review for a change in grading criteria
    c. the term "initial" could be used, rather than "periodic" or "constant"
    d. eliminate Level 1
    e. in Level 3, add "for reinforcement"
    f. is Level 3 equated with initial supervision?
3. Skills required in certain specialized areas could be designated as "special" skills rather than "non-essential".
4 .The term "newly employed nurse" should be used throughout, instead of "new graduate".
5. Possible item incompatibility with hospital policy (e.g. F-11, F-12, G-36).
6. Changes necessary in certain skill specifications.
7. Need for separation of some items into two separate skills (e.g. G-31, G-27, B-5, F-18).

8. Ambiguity of items in Section F.

9. Typographical errors.

In one instance only, an additional skill was added - preparation and administration of insulin.

Four respondents indicated the time required to complete the skill list (35, 40, 60, and 75 minutes).

APPENDIX D

INSTRUCTIONS FOR VALIDATING THE REQUIRED COMPETENCY PROFILE

APPENDIX D

INSTRUCTIONS FOR VALIDATING REQUIRED COMPETENCY PROFILE

The Inservice Department is attempting to identify Essential Manual skills required by newly employed nurses at the University of Alberta Hospital who work in the Medical Surgical areas. We would like your assistance in gaining some information regarding the skills which, in your professional judgement, are required of the newly employed nurse to ensure safe nursing care.

Please read the following instructions carefully, at least twice, before proceeding.* If you have any questions at any time while completing this form, please contact _________ at ext. _____. Please leave your name and station if she is unavailable. Please return this form to Inservice Education by (2 weeks time).

1. Read carefully all the skills and procedural specifications contained on the form.
2. Over the period of one week consider and observe the skills which are used frequently by General Duty Nurses in your area.
3. Consider which skills are essential for the safe functioning of General Duty Nurses in your area.

*DO NOT ATTEMPT TO COMPLETE THE FORM DURING THIS PERIOD OF TIME.

4. Reread each skill and procedural specification contained in the form.
5. Indicate those which you feel are essential in your area for a newly employed nurse to be able to function safely.
6. Indicate for each essential skill the level of performance expected of the newly employed nurse.
    1. Can perform this task safely without supervision and/or assistance.
    2. Can perform this task safely but requires initial supervision and/or assistance.
    3. Can perform this task safely but requires repeated supervision and/or assistance.
7. Please take the time to complete this form as carefully and thoughtfully as possible.
8. On a separate sheet provided:
    1. Please comment on any listed skill which you find poorly written.
    2. Please add any additional manual skills which you feel are essential for safe nursing care - include specifications and the level of performance expected.

Thank you for assisting with this project.

APPENDIX E

VALIDATION RESULTS

APPENDIX E

Validation Results Tabulated from Surgical and Medical Areas Both Separately and Combined, Indicating Skills Not Approved by 70% of the Validated

Skill	Surg.	Med.	Med.& Surg.	TOTAL	% TOTAL	NOT APPROVED BY 70% OF VALIDATORS
A 1	39	32	2	73	100	
2	38	32	2	72	99	
3	39	32	2	73	100	
4	39	32	2	73	100	
5	28	27	2	57	78	
6	15	17	2	34	47	x
7	32	29	2	63	86	
8	29	26	2	57	78	
9	16	26	2	44	60	x
10	38	32	2	72	99	
11	36	28	2	66	90	
12	39	32	2	73	100	
13	34	32	2	65	89	
14	34	32	2	68	93	
15	39	32	2	73	100	
16	39	32	2	73	100	
B 1	38	32	2	72	99	
2	39	32	2	73	100	
3	39	31	2	72	99	
4	39	31	2	72	99	
5	37	30	2	69	95	
6	39	32	2	73	100	
C 1	39	32	2	73	100	
2	39	32	2	73	100	
3	17	24	2	43	59	x
4	38	32	2	72	99	
5	38	30	2	70	96	
6	39	32	2	73	100	
7	39	32	2	73	100	
8	35	26	2	63	86	
9	24	12	2	38	52	x
10	38	31	2	71	97	

Validation Results - Surgical & Medical Areas (Continued)

Skill	Surg.	Med.	Med.& Surg.	TOTAL	% TOTAL	NOT APPROVED BY 70% OF VALIDATORS
D 1	39	32	2	73	100	
2	35	31	2	68	93	
3	38	31	2	71	97	
4	34	28	1	63	86	
5	29	25	1	55	75	
6	32	23	2	57	78	
7	35	28	2	65	89	
8	39	32	2	73	100	
9	38	31	2	71	97	
E 1	39	32	2	73	100	
2	34	32	2	68	93	
3	20	30	2	52	71	
4	39	32	2	73	100	
5	39	32	2	73	100	
F 1	38	32	2	72	99	
2	39	32	2	73	100	
3	39	32	2	73	100	
4	37	24	2	63	86	
5	36	24	2	62	85	
6	31	25	2	58	79	
7	39	31	2	72	99	
8	37	28	2	67	92	
9	26	20	2	48	66	x
10	37	28	2	67	92	
11	29	21	2	52	71	
12	20	17	2	39	53	x
13	32	22	2	56	77	
14	24	18	2	44	60	x
15	39	31	2	72	99	
16	29	26	2	57	78	
17	15	13	2	30	41	x
G 1	39	32	2	73	100	
2	37	31	2	70	96	
3	35	28	2	65	89	
4	39	31	2	72	99	
5	39	32	2	73	100	

Validation Results - Surgical & Medical Areas (Continued)

Skill	Surg.	Med.	Med.& Surg.	TOTAL	% TOTAL	NOT APPROVED BY 70% OF VALIDATORS
G 6	19	24	1	44	60	x
7	38	31	2	71	97	
8	29	27	1	57	78	
9	36	30	2	67	92	
10	38	32	2	72	99	
11	38	31	2	71	97	
12	39	30	2	71	97	
13	39	32	2	73	100	
14	24	28	2	54	74	
15	37	31	2	70	96	
16	39	31	2	72	99	
17	38	27	2	67	92	
18	34	29	2	65	89	
19	35	30	2	67	92	
20	34	30	2	66	90	
21	27	20	1	48	66	x
22	32	27	2	61	84	
23	39	29	2	70	96	
24	32	28	2	62	85	
25	31	27	2	60	82	
26	14	12	1	27	37	x
27	39	32	2	73	100	
28	30	27	2	59	81	
29	21	21	2	44	60	x
30	38	31	2	71	97	
31	39	31	2	72	99	
32	19	17	2	38	52	x
33	39	22	2	63	86	
34	27	14	2	43	59	x
35	38	30	2	70	96	
36	24	15	2	41	56	x
37	25	20	2	47	64	x
38	19	20	2	41	56	x
39	29	18	2	49	67	x
40	19	11	2	32	44	x

Validation Results - Surgical & Medical Areas (Continued)

Skill	Surg.	Med.	Med.& Surg.	TOTAL	% TOTAL	NOT APPROVED BY 70% OF VALIDATORS
G 41	18	10	2	30	41	x
42	25	15	2	42	58	x
43	37	31	2	70	96	
44	35	30	2	67	92	
45	37	28	2	69	95	
46	36	31	2	69	95	
H 1	39	32	2	73	100	
2	39	32	2	73	100	
3	39	32	2	73	100	
4	39	31	2	72	99	
5	39	31	2	72	99	
6	36	32	2	70	96	
7	31	30	2	63	86	
8	27	29	2	58	79	
9	33	30	2	65	89	
10	38	31	2	56	77	
11	28	26	2	56	77	
I 1	16	21	2	39	53	x
2	21	24	2	47	64	x
3	20	26	2	48	66	x
4	20	22	2	44	60	x
5	17	18	2	37	51	x
6	30	29	2	61	84	
7	18	11	2	31	42	x
J 1	38	32	2	72	99	
2	25	15	2	42	58	x
3	35	32	2	69	95	
4	26	26	2	54	74	
5	26	27	2	55	75	
6	35	23	2	60	82	
7	32	26	2	60	82	
8	33	26	2	61	84	
9	39	32	2	73	100	
10	37	24	2	63	86	

Validation Results tabulated from Surgical Areas indicating percentage approval of skills and level chosen

Skill		Essential	% Essential	Nonessential	Level 1	Level 2	Level 3
A	1	39 (2)	100	-	39 (2)		
	2	38 (2)	97	1	38 (2)		
	3	39 (2)	100	-	39 (2)		
	4	39 (2)	100	-	39 (2)		
	5	28 (2)	72	11	13 (1)	15 (1)	
	6	15 (2)	38	23	1	12 (2)	2
	7	32 (2)	82	7	31 (2)	1	
	8	29 (2)	74	10	27 (2)	2	
	9	16 (2)	41	13	17(1)	9 (1)	
	10	38 (2)	97	1	37 (2)	1	
	11	36 (2)	92	3	33 (2)	3	
	12	39 (2)	100	-	39 (2)		
	13	35 (2)	90	4	33 (2)	3	
	14	34 (2)	87	5	34 (2)		
	15	39 (2)	100	-	39 (2)		
	16	39 (2)	100	-	39 (2)		
B	1	38 (2)	97	1	38 (1)		
	2	39 (2)	100	-	38 (1)		
	3	39 (2)	100	-	32 (1)	1	
	4	39 (2)	100	-	31 (1)	8 (1)	
	5	37 (2)	95	2	35 (1)	4 (1)	
	6	39 (2)	100	-	35 (1)	4 (1)	
C	1	39 (2)	100	-	22 (1)	14 (1)	3
	2	39 (2)	100	-	20 (1)	16 (1)	3
	3	17 (2)	44	20	2	13 (2)	2
	4	38 (2)	97	1	25 (2)	13	
	5	38 (2)	97	1	26	10 (2)	2
	6	39 (2)	100	-	27 (1)	10 (1)	2
	7	39 (2)	100	-	27 (2)	11	1
	8	35 (2)	90	4	28 (1)	5 (1)	1 (1)
	9	24 (2)	62	15	3	16 (2)	5
	10	38 (2)	97	1	31 (1)	5 (1)	2

Validation Results - Surgical Areas (Continued)

Skill	Essential	% Essential	Nonessential	Level 1	Level 2	Level 3
D 1	39 (2)	100	-	39 (2)		
2	35 (2)	90	4	28 (1)	5 (1)	2
3	38 (2)	97	1	22	15 (1)	1 (1)
4	34 (1)	87	5 (1)	26 (1)	8	
5	29 (1)	73	10 (1)	11	14 (1)	4
6	32 (2)	82	7	12	16 (1)	4 (1)
7	35 (2)	90	3	15 (1)	18	2 (1)
8	39 (2)	100	-	38 (2)	1	
9	38 (2)	97	1	18 (1)	18 (1)	2
E 1	39 (2)	100	-	37 (2)	2	
2	34 (2)	87	5	33 (2)	1	
3	20 (2)	51	19	4	12 (2)	4
4	39 (2)	100	-	21 (1)	11 (1)	7
5	39 (2)	100	-	34 (2)	4	
F 1	38 (2)	97	1	32 (2)	6	
2	39 (2)	100	-	30 (1)	9 (1)	
3	39 (2)	100	-	26 (1)	13 (1)	
4	37 (2)	95	2	15	21 (2)	1
5	36 (2)	92	3	8	22 (2)	1
6	31 (2)	73	8	8	22 (2)	1
7	39 (2)	100	-	18 (1)	19 (1)	2
8	37 (2)	95	2	8	23 (2)	6
9	26 (2)	67	13	2	16 (1)	7 (1)
10	37 (2)	95	1	26 (2)	11	
11	29 (2)	73	9	21 (2)	7	1
12	20 (2)	51	19	2	7 (1)	11 (1)
13	32 (2)	82	5	18 (2)	14	4 (2)
14	24 (2)	62	14	6	14	4 (2)
15	39 (2)	100	-	30 (1)	9	(1)
16	29 (2)	73	10	10	18 (2)	1
17	15 (2)	38	24	3	11 (1)	1 (1)

Validation Results - Surgical Areas (Continued)

Skill	Essential	% Essential	Nonessential	Level 1	Level 2	Level 3
G 1	39 (2)	100	-	38 (2)	1	
2	37 (2)	95	2	30 (1)	8 (1)	
3	35 (2)	90	4	29 (1)	6 (1)	
4	39 (2)	100	-	35 (2)	4	
5	39 (2)	100	-	26 (2)	11	2
6	19 (1)	49	20 (1)	5	9 (1)	5
7	38 (2)	97	1	23 (2)	5	10
8	29 (1)	74	10 (1)	4	18 (1)	7
9	36 (2)	92	3	16 (1)	17 (1)	3
10	38 (2)	97	1	36 (2)	1	
11	38 (2)	97	1	29 (1)	4 (1)	5
12	39 (2)	100	-	27	11 (2)	1
13	39 (2)	100	-	19 (1)	20 (1)	
14	24 (2)	62	15	10	12 (2)	2
15	37 (2)	95	2	23 (2)	14	
16	39 (2)	100	-	20 (2)	18	1
17	38 (2)	97	1	22 (2)	18	1
18	34 (2)	87	5	12	19 (2)	3
19	35 (2)	90	4	13	21 (2)	1
20	34 (2)	87	5	20 (1)	12 (1)	2
21	27 (1)	63	12	7	18	2 (1)
22	32 (2)	82	7	28 (2)	4	
23	39 (2)	100	-	35 (2)	4	
24	32 (2)	82	7	25 (1)	6 (1)	1
25	31 (2)	73	8	4	16 (1)	11 (1)
26	14 (1)	36	25 (1)	7	6 (1)	1
27	39 (2)	100	-	30 (2)	9	
28	30 (2)	77	9	24 (1)	6 (1)	
29	21 (2)	54	18	9 (1)	12	(1)
30	38 (2)	97	1	27 (2)	11	
31	39 (2)	100	-	29 (1)	10 (1)	
32	19 (2)	49	20	8 (1)	10 (1)	1
33	39 (2)	100	-	18	21 (2)	
34	27 (2)	63	12	15 (1)	12 (1)	
35	38 (2)	97	1	28	10 (2)	

Validation Results - Surgical Areas (Continued)

Skill	Essential	% Essential	Nonessential	Level 1	Level 2	Level 3
G 36	24 (2)	62	15	8	10	6 (2)
37	25 (2)	64	14	11	14 (2)	
38	19 (2)	49	17	4	15 (1)	2 (1)
39	29 (2)	74	10	15 (1)	13 (1)	1
40	19 (2)	49	20	1	12	6 (2)
41	18 (2)	46	21	2	9	7 (2)
42	25 (2)	64	14	8	11 (1)	6 (1)
43	37 (2)	95	2	16 (1)	19 (1)	2
44	35 (2)	90	4	23 (2)	9	3
45	37 (2)	95	2	12 (1)	19 (1)	6
46	36 (2)	92	3	6	26 (2)	5
H 1	39 (2)	100	-	21 (1)	14	4 (1)
2	39 (2)	100	-	24 (1)	11 (1)	4
3	39 (2)	100	-	31 (1)	4	4 (1)
4	39 (2)	100	-	22 (1)	12	5 (1)
5	39 (2)	100	-	7	24 (1)	8 (1)
6	36 (2)	92	3	6	28 (2)	2
7	31 (2)	73	8	15	15 (2)	
8	27 (2)	63	11	14 (1)	13 (1)	
9	33 (2)	85	6	24 (2)	8	
10	38 (2)	97	1	32 (2)	4	
11	28 (2)	72	10	25 (2)	3	
I 1	16 (2)	41	23	3	7 (2)	6
2	21 (2)	54	18	5	10 (2)	6
3	20 (2)	51	19	5	9 (2)	4
4	20 (2)	51	19	4	12 (2)	4
5	17 (2)	44	22	9	6 (2)	2
6	30 (2)	77	9	5 (1)	24 (1)	2
7	18 (2)	46	21	3	10 (1)	5 (1)
J 1	38 (2)	97	1	25 (2)	12	1
2	25 (2)	64	14	1 (1)	13 (1)	11
3	35 (2)	90	4	24 (2)	11	
4	26 (2)	67	13	11 (1)	13 (1)	2
5	26 (2)	67	13	17 (2)	9	

Validation Results - Surgical Areas (Continued)

Skill	Essential	% Essential	Nonessential	Level 1	Level 2	Level 3
J 6	35 (2)	90	4	13 (1)	22 (1)	
7	32 (2)	82	7	15	17 (2)	
8	33 (2)	85	6	8	24 (2)	1
9	39 (2)	100	-	17 (2)	18	4
10	37 (2)	95	2	5	29 (1)	3 (1)

Note: Numbers in brackets indicate response of the two area supervisors who cover both Medical and Surgical Units

Validation Results tabulated from Medical Areas indicating percentage approval of skills and level chosen

Skill		Essential	% Essential	Nonessential	Level 1	Level 2	Level 3
A	1	32	100	-	32		
	2	32	100	-	31	1	
	3	32	100	-	32		
	4	32	100	-	30	1	
	5	27	84	5	20	7	
	6	17	53	15	3	12	1
	7	29	91	3	26	3	
	8	26	81	6	22	4	
	9	26	81	5	14	11	1
	10	32	100	-	32		
	11	28	88	4	27	1	
	12	32	100	-	32		
	13	28	88	4	25	3	
	14	32	100	-	32		
	15	32	100	-	27	5	
	16	32	100	-	32		
B	1	32	100	-	32		
	2	32	100	-	32		
	3	31	97	-	26	5	
	4	31	97	-	24	7	
	5	30	94	2	28	2	
	6	32	100	-	28	4	
C	1	32	100	-	23	8	
	2	32	100	-	24	8	
	3	24	75	8	5	15	4
	4	32	100	-	27	4	1
	5	30	94	2	19	11	
	6	32	100	-	30	2	
	7	32	100	-	31	1	
	8	26	81	6	19	7	
	9	12	38	20	5	6	
	10	31	97	1	23	8	

Validation Results - Medical Areas (Continued)

Skill		Essential	% Essential	Nonessential	Level 1	Level 2	Level 3
D	1	32	100	-	31	1	
	2	31	97	1	26	5	
	3	31	97	1	14	14	3
	4	28	88	4	14	13	1
	5	25	78	7	5	14	6
	6	23	72	9	10	11	2
	7	28	88	4	12	15	1
	8	32	100	-	31	1	
	9	31	97	-	18	11	2
E	1	32	100	-	32		
	2	32	100	-	32		
	3	30	94	2	5	22	3
	4	32	100	-	14	16	2
	5	32	100	-	29	3	
F	1	32	100	-	29	3	
	2	32	100	-	25	6	1
	3	32	100	-	25	7	
	4	24	75	8	11	13	
	5	24	75	8	8	15	1
	6	25	78	7	10	13	2
	7	31	97	1	20	11	1
	8	28	88	4	9	14	4
	9	20	63	12	5	12	3
	10	28	88	4	20	7	1
	11	21	66	11	16	5	
	12	17	53	15	2	6	9
	13	22	69	10	12	8	2
	14	18	56	14	5	11	2
	15	31	97	1	28	3	
	16	26	81	6	9	15	2
	17	13	41	19	3	3	7
G	1	32	100	-	31		
	2	31	97	1	23	8	
	3	28	88	4	22	6	
	4	31	97	1	31		
	5	32	100	-	23	8	1

Validation Results - Medical Areas (Continued)

Skill	Essential	% Essential	Nonessential	Level 1	Level 2	Level 3
G 6	24	75	8	5	17	2
7	31	97	1	16	5	10
8	27	84	5	4	18	5
9	30	94	2	12	17	1
10	32	100	-	31	1	
11	31	97	1	14	14	3
12	30	94	2	15	13	1
13	32	100	-	17	15	
14	28	88	4	9	18	1
15	31	97	1	23	8	
16	31	97	1	21	9	1
17	27	84	5	17	10	
18	29	91	3	7	19	3
19	30	94	2	10	18	2
20	30	94	2	17	13	
21	20	63	12	7	11	2
22	27	84	5	23	4	
23	29	91	3	28	1	
24	28	88	4	21	7	
25	27	84	5	4	16	7
26	12	38	20	4	8	
27	32	100	-	25	7	
28	27	84	5	23	4	
29	21	66	11	6	15	
30	31	97	1	21	10	
31	31	97	1	19	12	
32	17	53	15	6	10	1
33	22	69	10	6	13	3
34	14	44	17	9	5	
35	30	94	1	20	10	
36	15	47	16	3	8	4
37	20	63	11	13	7	
38	20	63	11	5	12	3
39	18	56	14	12	5	1
40	11	34	21	1	6	4

Validation Results - Medical Areas (Continued)

Skill	Essential	% Essential	Nonessential	Level 1	Level 2	Level 3
G 41	10	31	22	2	5	3
42	15	47	17	5	7	3
43	31	97	1	14	16	1
44	30	94	2	25	3	2
45	28	88	4	9	17	2
46	31	97	1	6	21	4
H 1	32	100	-	18	12	2
2	32	100	-	25	7	
3	32	100	-	26	5	1
4	31	97	-	15	13	3
5	31	97	1	9	19	3
6	32	100	-	9	22	1
7	30	94	2	20	9	1
8	29	91	3	20	9	
9	30	94	2	26	4	
10	31	97	1	30	1	
11	26	81	6	24	2	
I 1	21	66	11	6	13	2
2	24	75	8	8	14	2
3	26	81	6	9	14	3
4	22	69	10	4	15	3
5	18	56	14	8	8	2
6	29	91	3	7	19	3
7	11	34	21	4	4	3
J 1	32	100	-	18	12	2
2	15	47	17	2	7	5
3	32	100	-	24	8	
4	26	81	6	7	19	
5	27	84	5	16	11	
6	23	72	9	11	12	
7	26	81	6	7	16	3
8	26	81	6	2	18	6
9	32	100	-	15	17	
10	24	75	8	3	20	1

APPENDIX F

SKILLS ADDED TO REQUIRED COMPETENCY PROFILE

APPENDIX F

Skills Added to Required Competency Profile

Skill	No. Finding Essential	No. Finding Nonessential	% Essential	Skills Not Retained at 70%
Initiate IV Therapy	14	3	82	
Regulate IV flow using IVAC machine	16	1	94	
Monitor TPN	13	3	81	
Apply blood pump	12	5	71	
Monitor CVP	9	8	53	x
Monitor arterial lines	7	10	41	x
Apply skin tapes	16	1	94	
Give endotracheal tube care	11	6	65	x
Weaning from and removal of gastric and intestinal tubes	10	6	63	x
Maintain wound drainage through Saratoga sump tube	14	3	82	
Assist with collection of blood gases	15	2	88	
Monitor blood administration	17	-	100	

APPENDIX G

ADDITIONAL COMMENTS OBTAINED FROM VALIDATORS

APPENDIX G

ADDITIONAL COMMENTS OBTAINED FROM VALIDATORS

Instructions accompanying the R.C.P. required that the participant:

1. make any comments
2. add any additional manual skills not included, which are essential for safe nursing care.

A blank sheet of paper was attached to the R.C.P. for this purpose. Nineteen respondents made use of this sheet. Comments might be categorized as follows:

1. additional manual skills identified
2. skills commented upon as being important
3. comment on specific skills
4. non-manual nursing skills identified
5. general comments.

1. Additional Manual Skills Identified

a. pre and post op care

b. weaning from and removal of jejeunostomy tube, duodenostomy tube, gastrostomy tube, thoracic pumps, foley, hemovac, T-tube, chest tubes.

c. replacement of N/G losses

d. TPN skills - tubing set-up, tubing change and maintenance of TPN

e. IV skills - tubing change, use of blood sets, albumin lines, IVAC's, blood pump

f. cardiac monitors (exposure to equipment)

g. IMED function

h. medications - topical (special instruction re Nitrol)

i. water beds

j. care of telemetry

k. 12 lead EKG's

l. start IV

m. temporary pacemaker care

n. application of skin tapes

o. Saratoga sumps

p. collection of blood gases

q. CVP lines

r. subclavian lines

s. application of burn dressings

t. burn cleaning and debridement

u. application of Jobst garment

v. care of patient with endotracheal tube

w. care of respirator

x. arterial lines

y. graft/donor site care

z. application pigskin dressings

aa. care of arch bar wiring

bb. flap care, suture line care, care of reimplant surgery post op.

2. Skills Commented Upon as Being Important

   (present on skill list, but importance stressed)

   a. shave preps
   b. wound care
   c. ostomy care
   d. surgical drains
   e. body mechanics
   f. use of patient lifts

3. Comment on Specific Skills

   a. A female nurse should never have to apply a condom. An orderly should be available within the hospital to do this.
   b. Sutures are removed in orthopedics - except Dr. Boucher's wire sutures.
   c. Insert and remove urethral catheter for male patient - "Related to current orderly shortage; I am beginning to think this should be a part of a nurse's repertoire."
   d. Insert and remove oral airway - "Removal is part of post-op care. Not too sure whether I think they need to know how to insert."

4. Non-manual Nursing Skills Identified

   a. patient teaching
   b. assessing a patient's changing conditions
   c. reporting and recording patient care (charting, nursing history, nursing care plan)

- d. processing of doctors' orders
- e. assuming further responsibility (team leading, being in charge)
- f. assessment of patient for analgesic need

5. General Comments
   - a. additions to orientation program would be helpful - tour of hospital (x-ray, lab, blood bank, pharmacy, laundry, C.S.R., dietary) - review of requisitions used in contacting these departments - show open trays (L.P., cutdown, dressing) so nurse will know what is included.
   - b. Mewburn Pavilion general M/S floors specialize in care of the adult male patient. Therefore, skills appropriate to females and children are not applicable to this group. Examples are: hold as indicated, douches, pelvic examinations, female catheterization.
   - c. mandatory follow-up at three months to review checklist and establish goals for the next three months.
   - d. possibly provide orientation handbook for student interns and residents.
   - e. "I found breaking into a floor much more psychologically draining than anticipated. Even basic interacting with peers is strenuous.."
   - f. the majority of newly employed nurses require one supervision or demonstration of skills.
   - g. there is no formal supervision for any task - the newly employed nurse must ask for supervision as required.

h. no standardized hospital procedure for skin breakdown ("everyone does something different".

i. most of the skills listed were basic in nursing training. Supervision would be given when procedures differ from the way they were taught.

j. because very little supervision is given (ward too busy) it was necessary to mark Essential - Level 1 for most of the skills. Otherwise care is unsafe, as staff seldom have time to supervise repeatedly, or even initially.

APPENDIX H

COMPETENCY ANALYSIS PROFILE

APPENDIX H

COMPETENCY ANALYSIS PROFILE

Manual Skills for Newly Employed Nurses

In order to develop a more useful and pertinent orientation program for nurses in medical/surgical areas at the University of Alberta Hospital, the Inservice Education Department is distributing this questionnaire to newly employed nurses in the medical/surgical areas. The questionnaire will be used entirely for research purposes and respondents will remain anonymous.

The following information will be helpful in determining orientation needs of specific groups:

1. Year of graduation: ________________________________

2. Type of basic nursing education (R.N. - hospital-based, R.N. - college-based, basic B.Sc.): ________________________________

3. Duration of basic nursing education (2 years, 2 1/2 years, 3 years, 4 years): ________________________________

4. Number of years experience in active nursing: ______________

5. Number of years away from active nursing: ______________

6. Date of refresher course: ________________________________

Instructions

Please read the following instructions carefully at least twice before proceedings.

1. Read carefully each skill and its procedural guidelines.

2. Apply the list of general procedural guidelines (p. 3) to each skill as you read.

3. Indicate by circling the appropriate letter, whether you can safely perform the skill.

4. Indicate the level of performance at which you can perform those skills marked "Yes".

Level 1: Can perform this task satisfactorily without supervision and/or assistance.

Level 2: Can perform this task satisfactorily by require initial supervision and/or assistance.

Level 3: Can perform this task by require repeated supervision and/or assistance.

Please take time to complete this form carefully and thoughtfully.

Thank you for your assistance in this project.

General Procedural Guidelines

It must be assumed that where applicable the skill includes:

1. checking for an order
2. identifying the patient
3. hand washing
4. preparing environment
5. preparing and positioning patient
6. observing patient throughout procedure
7. observing effectiveness of procedure
8. observing patient for any untoward reactions

University of Alberta Hospital

Manual Skills for Newly Employed Nurses

A. ADMINISTER PERSONAL HYGIENE

Skill	Guidelines	Yes/No		Level of Performance		
A-1 Give complete bed bath		Yes	No	1	2	3
A-2 Assist with tub bath or shower		Yes	No	1	2	3
A-3 Give oral hygiene	- observe condition of mouth - assist patient as necessary to clean mouth and teeth - lubricate lips as required	Yes	No	1	2	3
A-4 Care for dentures	- remove dentures and clean - provide oral hygiene - replace dentures or store in labelled container in a safe place	Yes	No	1	2	3
A-5 Give eye care	- observe condition of patient's eyes - remove contact lenses if required - cleanse eyes or irrigate as necessary - provide for lubrication as required - apply patch if indicated	Yes	No	1	2	3
A-6 Give care to nose	- observe condition of nares - cleanse and lubricate nares as indicated	Yes	No	1	2	3

Skill	Guidelines	Yes/No		Level of Performance		
A-7 Give care to ears	- observe ears - cleanse as required	Yes	No	1	2	3
A-8 Shampoo, comb and brush hair		Yes	No	1	2	3
A-9 Give perineal care		Yes	No	1	2	3
A-10 Care for feet, hands and nails	- give diabetic foot care if required	Yes	No	1	2	3
A-11 Give facial shave		Yes	No	1	2	3
A-12 Dress and undress patient		Yes	No	1	2	3
A-13 Change gown of patient with I.V.		Yes	No	1	2	3
A-14 Give bedpans and urinals	- provide for hygienic measures	Yes	No	1	2	3

B. PROVIDE COMFORT MEASURES

Skill	Guidelines	Yes/No		Level of Performance		
B-1 Make and change beds		Yes	No	1	2	3
B-2 Give back rub		Yes	No	1	2	3
B-3 Give special skin care to pressure areas		Yes	No	1	2	3
B-4 Position patient to maintain good body alignment		Yes	No	1	2	3
B-5 Physically comfort patient	- touch, pat, hold as indicated	Yes	No	1	2	3
B-6 Provide aesthetic environment for patient	- organize equipment and personal belongings to meet patient needs - maintain tidy environment and remove unnecessary equipment - promote freshness of air - maintain room temperature to meet patient's needs - adjust lighting as appropriate - ensure that call cord is within reach	Yes	No	1	2	3

C. AMBULATE AND TRANSPORT PATIENTS

Skill	Guidelines	Yes/No		Level of Performance		
C-1 Transfer from bed to chair	- use good body mechanics - restrain as necessary	Yes	No	1	2	3
C-2 Transfer from bed to stretcher	- secure stretcher - assist patient to transfer, or - use 3-man lift, or - use transfer sheet - position and restrain	Yes	No	1	2	3
C-3 Transport via bed, stretcher, wheelchair	- position and restrain for safety and comfort	Yes	No	1	2	3
C-4 Give active and passive exercises	- ensure continuity as indicated	Yes	No	1	2	3
C-5 Assist patient to walk, sit, stand	- provide adequate support - maintain good body mechanics	Yes	No	1	2	3
C-6 Assist patient to turn in bed	- place pillows to maintain position as required	Yes	No	1	2	3
C-7 Assist with use of walker		Yes	No	1	2	3
C-8 Practice good body mechanics	- push, pull, lift, turn and bend while maintaining a broad base of support, good balance and alignment, proper weight distribution and centre of gravity	Yes	No	1	2	3

D. CARRY OUT PHYSICAL ASSESSMENT TECHNIQUES

Skill	Guidelines	Yes/No		Level of Performance		
D-1 Take vital signs	- measure temperature by oral, axilla, or rectal routes - measure pulse rate and note character (strength, regularity) - count respirations and note character - measure systolic and diastolic blood pressure	Yes	No	1	2	3
D-2 Take apical heart rate	- check radial and apical rates simultaneously if applicable - note character of apical pulse	Yes	No	1	2	3
D-3 Do neurological assessment	- determine state of alertness - determine orientation - observe both pupils simultaneously for equality of size and shape - observe direct pupillary light reflexes - observe facial symmetry - check handgrips - check movement and strength of extremities - check sensation	Yes	No	1	2	3
D-4 Assess tissue turgor	- observe and palpate skin in appropriate areas	Yes	No	1	2	3
D-5 Auscultate for breath sounds	- position stethescope - listen for air entry in all areas of the lungs - observe chest movement	Yes	No	1	2	3

Skill	Guidelines	Yes/No		Level of Performance		
D-6 Auscultate for bowel sounds	- position stethescope - determine presence or absence of bowel sounds	Yes	No	1	2	3
D-7 Palpate for abdominal distention		Yes	No	1	2	3
D-8 Measure height (in cm) and weight (in kg)		Yes	No	1	2	3
D-9 Assess drainage, discharge, flow	- measure amount if drainage flows into a container - estimate amount visually - check color, odor, consistency, contents - use aseptic technique as appropriate in handling both drainage mode and drainage material - disassemble and reassemble drainage mode correctly if applicable (excluding chest tubes)	Yes	No	1	2	3

E. MAINTAIN FLUID AND NUTRITIONAL BALANCE

Skill	Guidelines	Yes/No		Level of Performance		
E-1 Prepare patient for meals		Yes	No	1	2	3
E-2 Feed patient		Yes	No	1	2	3
E-3 Gavage patient	- prepare appropriate feeding - check that tube is in stomach - aspirate contents and measure (reinsert prior to feeding) - give feeding, adjusting volume as indicated - clear tube with water - maintain semi-Flowlers position for minimum of 30 minutes	Yes	No	1	2	3
E-4 Maintain I.V.'s	- evaluate whether I.V. functioning and take action as per hospital procedure - replace solution bag as indicated and prescribed - change tubing as per hospital procedure - identify solutions	Yes	No	1	2	3
E-5 Initiate I.V. therapy	- prepare solution and tubing - locate appropriate site - apply tourniquet - provide for asepsis - insert scalp vein (butterfly) needle - set drip rate	Yes	No	1	2	3

Skill	Guidelines	Yes/No		Level of Performance		
E-6 Regulate I.V. flow using IVAC machine		Yes	No	1	2	3
E-7 Monitor T.P.N.	- set up tubing and filter for glucose/nitrogen solution - set up tubing for Intralipid - infuse solutions simultaneously through a Sorenson connector - care for central catheter insertion site	Yes	No	1	2	3
E-8 Monitor blood administration	- identify blood products as per hospital procedure - prime blood set with appropriate solution - monitor patient for signs of transfusion reaction - administer albumin through special set	Yes	No	1	2	3
E-9 Apply blood pump		Yes	No	1	2	3
E-10 Measure intake and output		Yes	No	1	2	3

F. CARRY OUT ASEPTIC TECHNIQUES

Skill	Guidelines	Yes/No		Level of Performance		
F-1 Put on sterile gloves		Yes	No	1	2	3
F-2 Set up and add to sterile field	- establish sterile field - add equipment using forceps, gloved hand as appropriate - unwrap sterile supplies - pour sterile solutions - unwrap sterile supplies	Yes	No	1	2	3
F-3 Change dressings	- cleanse area using principles of sterile technique (e.g. 'clean to dirty')	Yes	No	1	2	3
F-4 Shorten or remove drains	- withdraw length specified in written order - secure with pin before cutting	Yes	No	1	2	3
F-5 Maintain wound drainage through Saratoga Sump tube	- assess function - maintain patency	Yes	No	1	2	3
F-6 Insert superficial wound packing		Yes	No	1	2	3
F-7 Remove packing from superficial wound	- (in Division of Urology, removal of wound packing is responsibility of medical staff)	Yes	No	1	2	3

Skill	Guidelines	Yes/No		Level of Performance		
F-8 Remove sutures	- includes skin sutures - does not include retention sutures, wire sutures, continuous skin sutures nor subcuticular sutures	Yes	No	1	2	3
F-9 Apply skin tapes	- apply tapes while maintaining tissue approximation	Yes	No	1	2	3
F-10 Irrigate wounds	- cleanse wound - assess wound - insert catheter; do not force if resistance is met - instill solution and allow to return before repeating - assess return - irrigate until therapeutic effect achieved - cleanse wound and surrounding area	Yes	No	1	2	3
F-11 Apply sterile compresses		Yes	No	1	2	3
F-12 Give Sitz bath	- immerse from mid-thigh to iliac crest	Yes	No	1	2	3
F-13 Insert and remove urethral catheter for female patient	- glove and drape - cleanse area around meatus - lubricate and insert catheter - if indwelling, assess function and position, and inflate balloon, attach and secure tubing - assess return - in removal, deflate balloon of indwelling catheter - withdraw catheter in rotating manner	Yes	No	1	2	3

Skill	Guidelines	Yes/No		Level of Performance		
F-14 Give catheter care	- cleanse around meatus and catheter - secure catheter and tubing - ensure that receptacle is kept below bladder level - maintain integrity and asepsis of drainage system	Yes	No	1	2	3
F-15 Irrigate bladder	- cleanse junction of catheter and tubing before disconnecting - using syringe, instill solution into catheter - assess patency, if blocked use gentle pressure - seek assistance if blockage persists - allow solution to drain before repeating - assess return	Yes	No	1	2	3

G. CARRY OUT OTHER PROCEDURES

Skill	Guidelines	Yes/No		Level of Performance		
G-1 Wash hands	- utilize mechanical and chemical means to cleanse hands - procede from fingertips upwards - dry thoroughly in same sequence - turn off tap using paper towel	Yes	No	1	2	3
G-2 Apply heat	- attend to precautions: - positioning source of heat - temperature control - note time treatment commenced - note patient's sensitivity to heat	Yes	No	1	2	3
G-3 Apply cold	- attend to precautions in positioning source of cold with regard to skin protection - note patient's sensitivity to cold	Yes	No	1	2	3
G-4 Sponge to reduce temperature	- check patient's temperature before and after sponging	Yes	No	1	2	3
G-5 Administer oxygen by mask, nasal catheter, nasal cannula	- apply delivery device to ensure comfort and adequate delivery of oxygen - check O_2 flow to give at prescribed rate	Yes	No	1	2	3

Skill	Guidelines	Yes/No	Level of Performance

G-6 Do cardiopulmonary resuscitation	- determine patient response
	- summon help
	- position patient
	- open airway
	- assess respiration
	- give 4 quick breaths
	- check carotid pulse
	- position hands on chest and commence compression and ventilation:
	  - 15:2 (one person)
	  - 5:1 (two people)
	- continue until arrival of relief and assistance
		Yes No	1 2 3

G-7 Administer intermittent positive pressure breathing	- attach patient administration unit to machine - insert medication and fluid as required - attach machine to oxygen source - adjust gauges and dials as prescribed - clean patient administration unit	Yes No	1 2 3
G-8 Suction nasopharyngeal passages	- check suction strength - suction passages using intermittent suction	Yes No	1 2 3
G-9 Assist patient who is vomiting	- position patient to keep airway as clear as possible - provide mouth care	Yes No	1 2 3

G-10 Assist patient who is choking	- assess airway; if blocked, institute emergency measures:
	  - summon assistance
	  - apply sudden pressure below sternum (Heimlich manoeuver)
	- suction
		Yes No	1 2 3

Skill	Guidelines	Yes/No		Level of Performance		
G-11 Assist with coughing and deep breathing	- auscultate for breath sounds - instruct to breath deeply and cough - splint abdominal or thoracic incisions firmly - auscultate for breath sounds on conclusion	Yes	No	1	2	3
G-12 Administer cold nebulization	- attach patient administration unit to machine - fill bottle to correct level with nebulization mixture - attach machine to wall outlet - clean patient administration unit	Yes	No	1	2	3
G-13 Assist with postural drainage	- auscultate for breath sounds - position patient for adequate drainage - follow with deep breathing and coughing - auscultate for breath sounds	Yes	No	1	2	3
G-14 Collect sputum specimen	- assist patient as required: · ensure adequate specimen with deep breathing and coughing or suctioning - care for specimen appropriately	Yes	No	1	2	3
G-15 Do shave preparation	- shave appropriate area - check area with light	Yes	No	1	2	3
G-16 Do skin preparation	- apply solution ordered to appropriate area in proper sequence - if a sterile skin prep, use aseptic technique - check skin for irritation	Yes	No	1	2	3

Skill	Guidelines	Yes/No		Level of Performance		
G-17 Insert nasogastric tubes	- determine correct length for insertion and mark tube - lubricate - insert tube while patient hyperextends neck - check for correct location of tube - secure tube in position	Yes	No	1	2	3
G-18 Irrigate nasogastric tubes (levine, or Salem sump double-lumened tube)	- disconnect suction - check position of tube by aspirating gastric contents - instill saline and withdraw gently - repeat until tube drains freely - reconnect to suction	Yes	No	1	2	3
G-19 Remove nasogastric tubes	- free tube - pinch/clamp tube - withdraw tube - give mouth and nose care	Yes	No	1	2	3
G-20 Insert rectal tubes	- lubricate and insert tube	Yes	No	1	2	3
G-21 Give enemas	- prepare correct amount of solution at correct temperature - lubricate rectal tube - administer solution as tolerated by patient - observe results	Yes	No	1	2	3
G-22 Disimpact feces	- lubricate glove - continue as tolerated or feces removed	Yes	No	1	2	3

Skill	Guidelines	Yes/No		Level of Performance		
G-23 Care for ostomies	- expose stoma and cleanse as indicated - observe skin and stoma - measure drainage as required - clean re-usuable equipment and prepare appliance - prepare skin and apply appliance - irrigate colostomy if required	Yes	No	1	2	3
G-24 Test urine for glucose, acetone, protein	- obtain specimen - test as indicated and observe result	Yes	No	1	2	3
G-25 Strain urine	- pour urine through strainer and observe - collect specimen of strained matter if indicated	Yes	No	1	2	3
G-26 Collect urine and stool specimens	- cleanse area if indicated for specimen required - label specimen and store appropriately	Yes	No	1	2	3
G-27 Take swabs	- expose area and obtain adequate uncontaminated specimen - label and store appropriately	Yes	No	1	2	3
G-28 Empty and reactivate hemovacs	- open drain plug, and drain contents - compress pump with hand - close drain plug while compressed	Yes	No	1	2	3
G-29 Apply anti-embolic stockings and tensor bandages	- apply smoothly, in a distal to approximal direction - check circulation	Yes	No	1	2	3

Skill	Guidelines	Yes/No	Level of Performance
G-30 Apply restraints	- include armboards, safety mitts, restraint jackets, wrist restraints - note pressure points - check for circulation	Yes No	1 2 3
G-31 Remove dangerous objects from patient	- utilize communication skills for voluntary release of dangerous objects - obtain adequate assistance - take measures to protect self and patient using minimal force	Yes No	1 2 3
G-32 Carry out isolation techniques	- assemble equipment as indicated - prepare and dress appropriately - maintain technique throughout care of patient - prepare and remove equipment, linen, garbage as per hospital procedure - wash hands, disrobe, wash hands	Yes No	1 2 3
G-33 Care for body after death	- obtain official pronouncement of death - disconnect and remove equipment - position body and replace prostheses - give additional care for body as required (partial bed bath) etc. - care for valuables - ensure family notified by doctor; coroners office notified	Yes No	1 2 3

H. ADMINISTER MEDICATIONS

Skill	Guidelines	Yes/No	Level of Performance
H-1 Prepare medication for administration	- use medication card to verify time, medication, dosage, route, patient - prepare according to directions - check labels sufficiently	Yes No	1 2 3
H-2 Give oral medications	- prepare medication as prescribed - identify patient - give medication with appropriate fluid - ensure that medication taken	Yes No	1 2 3
H-3 Give intramuscular, subcutaneous or intradermal injections	- prepare parenteral medications - select approoriate needle - select appropriate site	Yes No	1 2 3
H-4 Prepare and give different types of insulin		Yes No	1 2 3
H-5 Administer I.V. medication into I.V. solution bag or Buretrol	- prepare medication - assess function of established I.V. - administer medication into solution bag or Buretrol	Yes No	1 2 3
H-6 Administer medication by inhalation	- prepare medication - administer through inhalation equipment	Yes No	1 2 3
H-7 Instill eye drops and ointments		Yes No	1 2 3

Skill	Guidelines	Yes/No		Level of Performance		
H-8 Instill nose and ear drops and ointments		Yes	No	1	2	3
H-9 Apply topical medication		Yes	No	1	2	3
H-10 Insert suppositories		Yes	No	1	2	3
H-11 Give medicated baths and shampoos		Yes	No	1	2	3

I. ASSIST WITH DIAGNOSTIC AND THERAPEUTIC MEASURES

Skill	Guidelines	Yes/No		Level of Performance		
I-1 Assist with IV cutdowns		Yes	No	1	2	3
I-2 Assist with collection of blood gases		Yes	No	1	2	3

J. OPERATE AND CARE FOR EQUIPMENT

Skill	Guidelines	Yes/No		Level of Performance		
J.-1 Manipulate beds, stretchers, and wheelchairs	- manipulate all functional parts of beds, siderails, stretchers, and wheelchairs - apply and release brakes	Yes	No	1	2	3
J-2 Use footboards and bedcradles	- pad as necessary	Yes	No	1	2	3
J-3 Operate alternating pressure mattresses	- apply or remove mattress - inflate or deflate	Yes	No	1	2	3
J-4 Use hot and cold humifiers	- add water, ice as indicated - attach to outlet	Yes	No	1	2	3
J-5 Operate wall suction equipment and/or portable suction	- attach bottle to vacuum outlet - adjust to desired suction - attach tubing as necessary	Yes	No	1	2	3
J-6 Operate Wangenstein gastric suction equipment	- set at low suction unless otherwise ordered	Yes	No	1	2	3
J-7 Operate Gomco thoracic suction	- maintain water level at desired suction - ensure that drainage outlet remains under water at all times - leave two kelly forceps available for clamping tubing if necessary - maintain a closed system	Yes	No	1	2	3

Skill	Guidelines	Yes/No	Level of Performance
J-8 Operate fire extinguishers	- remove extinguisher from wall - remove pin - activate spray and aim at base of fire - reactivate spray	Yes No	1 2 3
J-9 Operate autoclave		Yes No	1 2 3

APPENDIX I

COMPARISON OF RESPONDENTS' ABILITIES TO PERFORM SPECIFIED SKILLS IN THE TEN COMPETENCY GROUPS IN RELATION TO EDUCATIONAL PREPARATION

Figure 2

Percentage of College, University and Hospital Prepared Nurses in Total Sample Unable to Perform Specific Skills in Competency Group A at Required Level

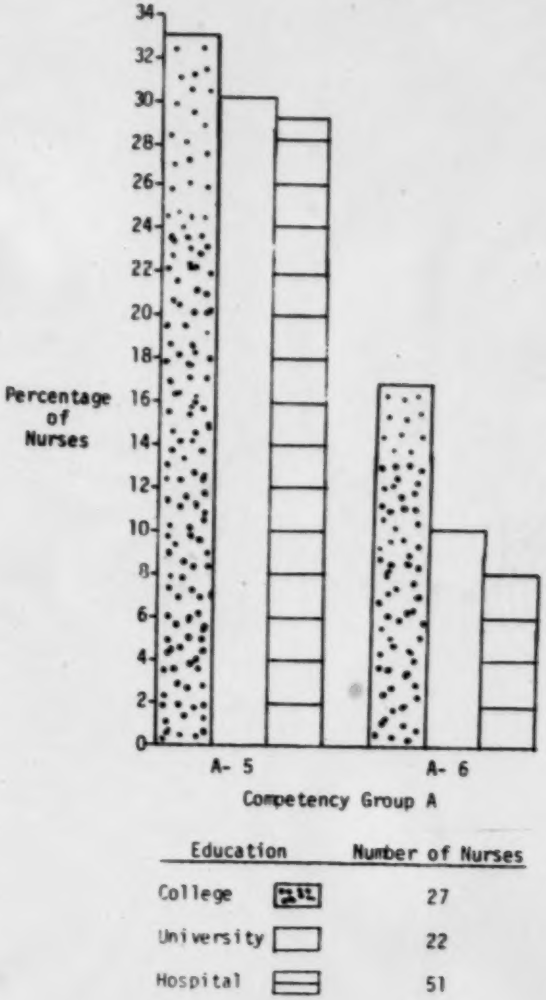


Figure 3

Percentage of College, University and Hospital Prepared Nurses in Total Sample Unable to Perform Specific Skills in Competency Group C at Required Level

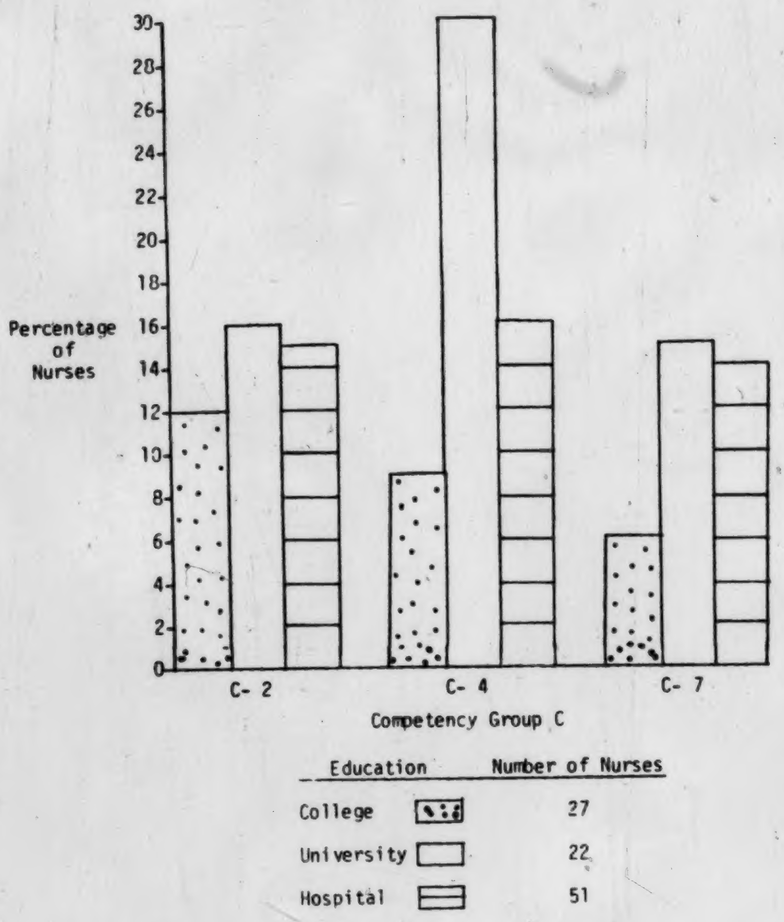


Figure 4

Percentage of College, University and Hospital Prepared Nurses in Total Sample Unable to Perform Specific Skills in Competency Group D at Required Level

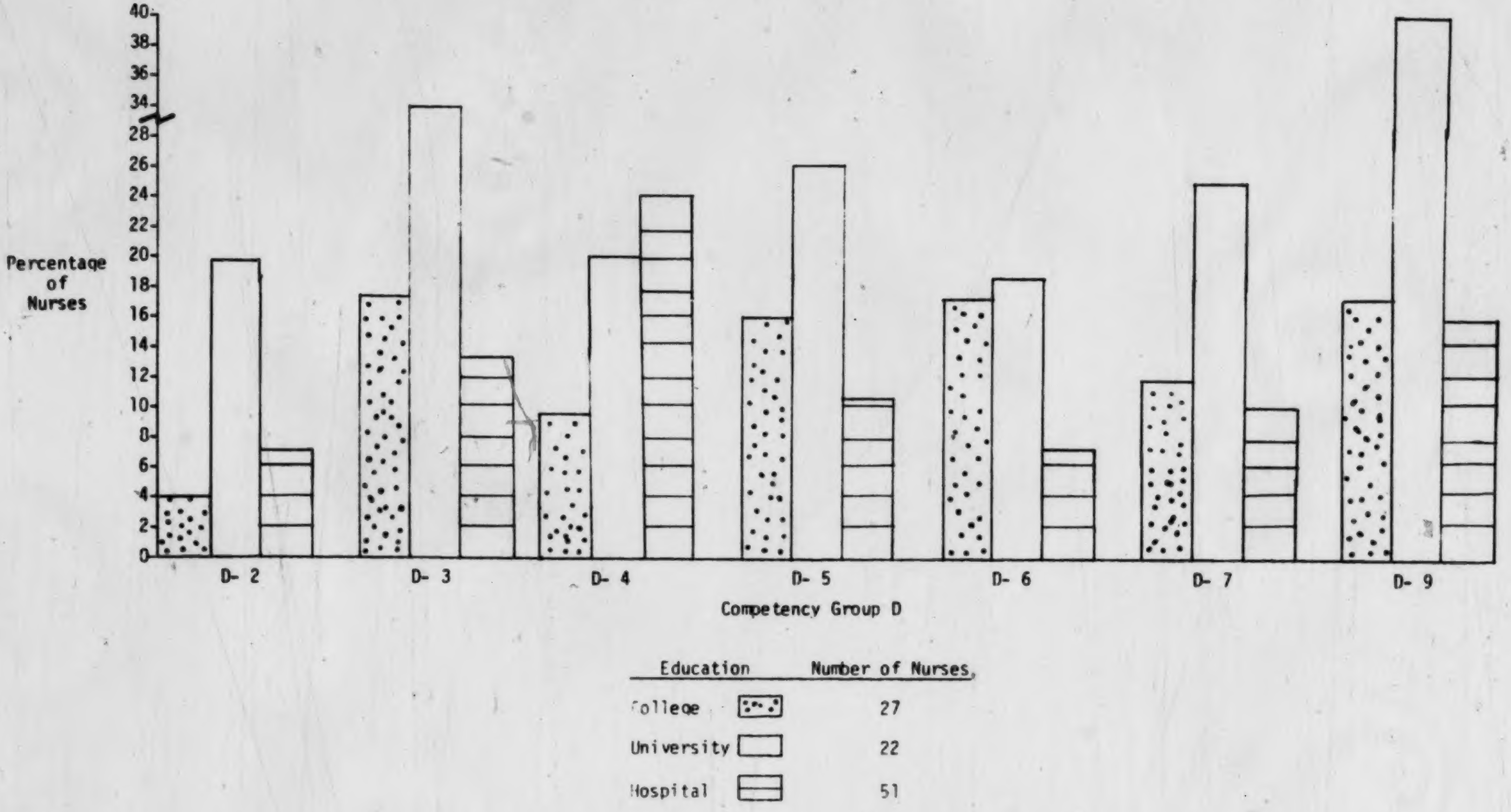


Figure 5

Percentage of College, University and Hospital Prepared Nurses in Total Sample Unable to Perform Specific Skills in Competency Group E at Required Level

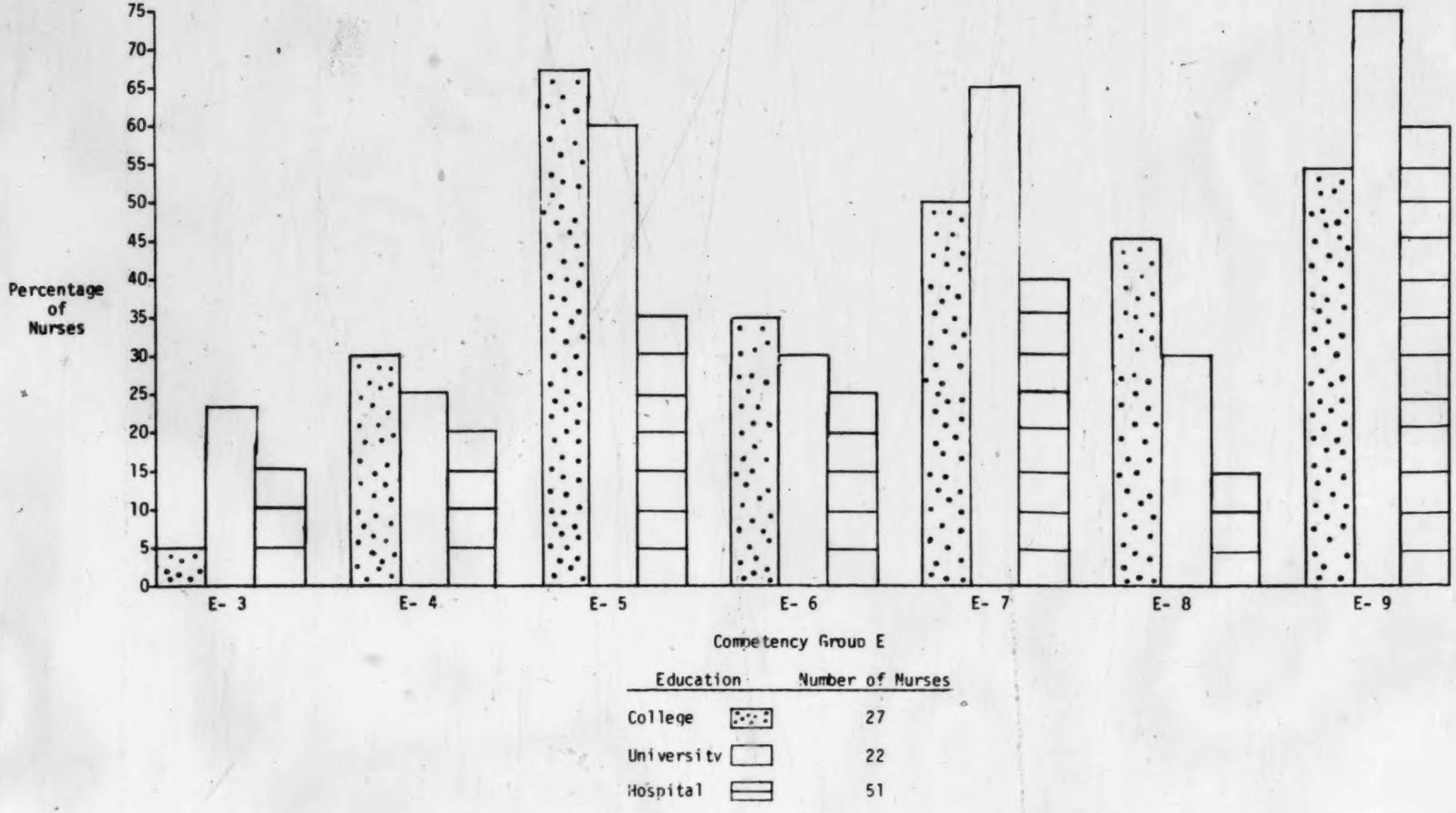


Figure 6

Percentage of College, University and Hospital Prepared Nurses
in Total Sample Unable to Perform Specific Skills in
Competency Group F at Required Level

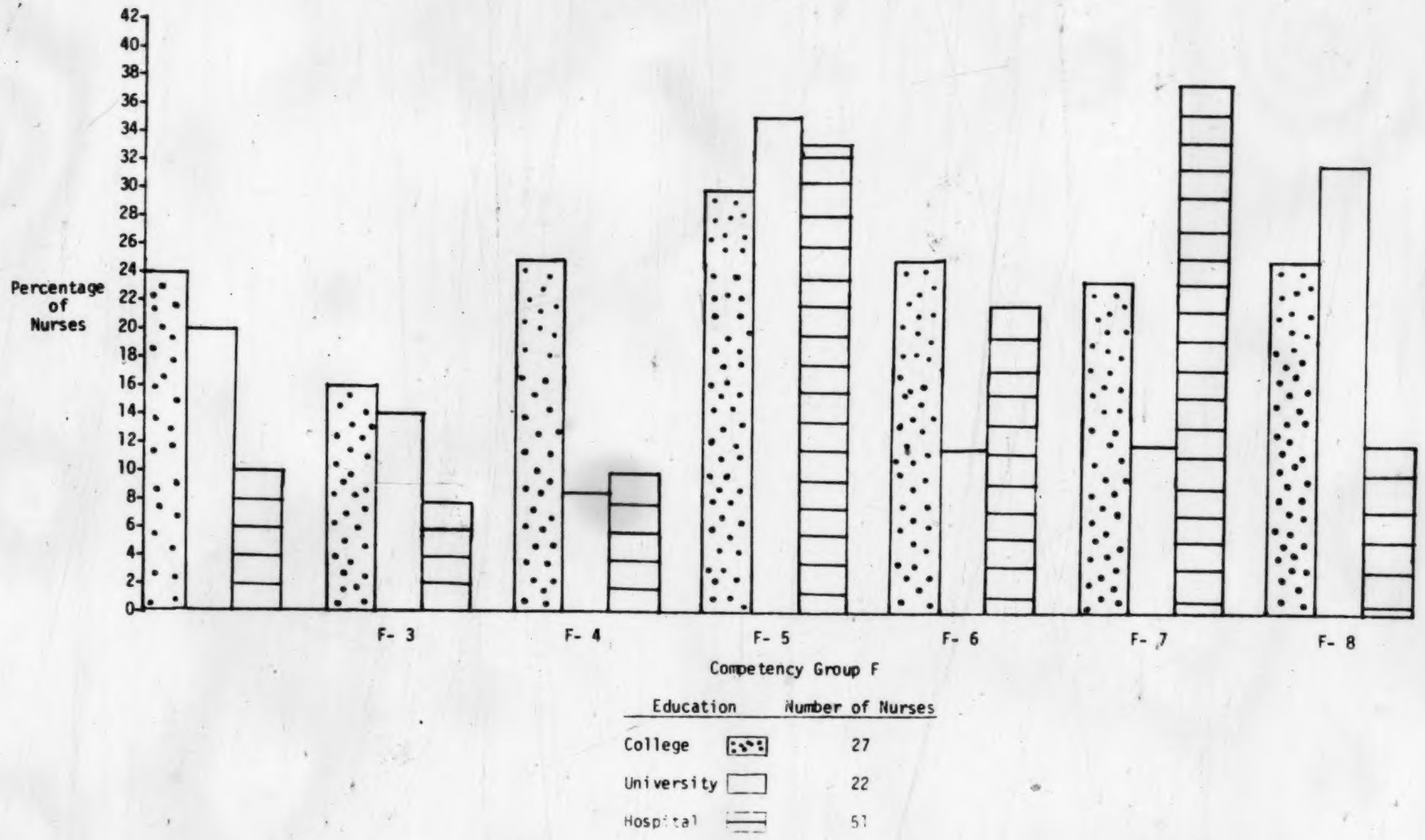


Figure 6 (continued)

Percentage of College, University and Hospital Prepared Nurses in Total Sample Unable to Perform Specific Skills in Competency Group F at Required Level

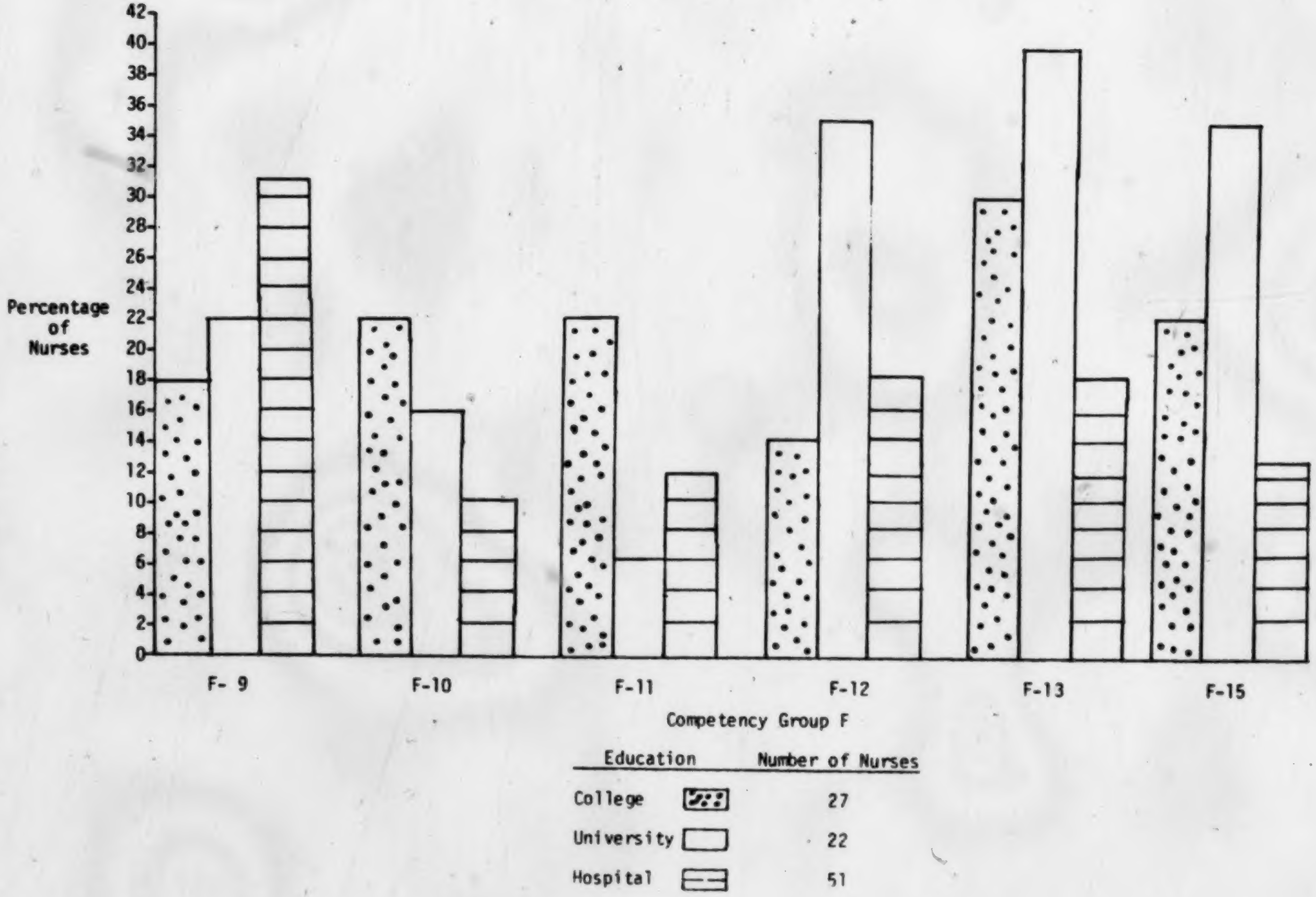


Figure 7

Percentage of College, University and Hospital Prepared Nurses in Total Sample Unable to Perform Specific Skills in Competency Group G at Required Level

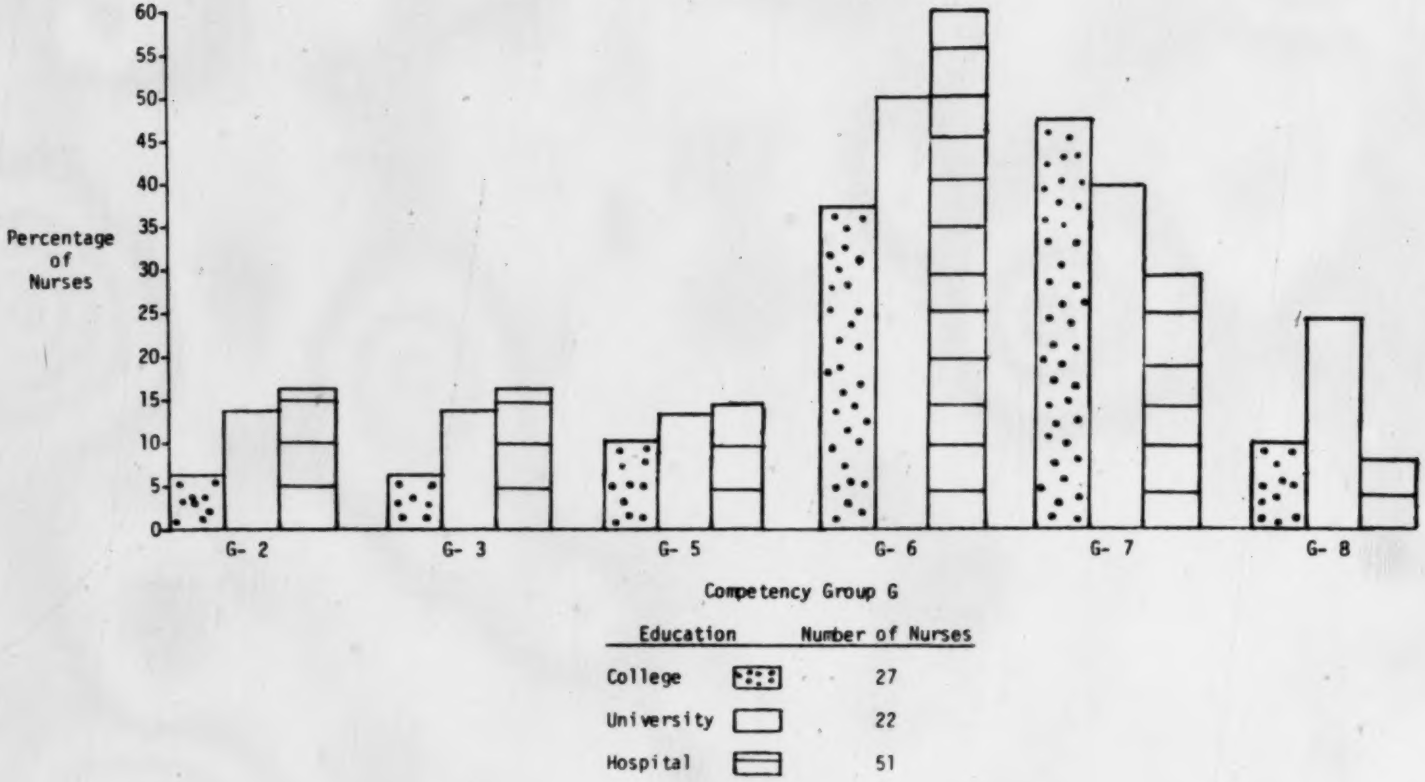


Figure 7 (continued)

Percentage of College, University and Hospital Prepared Nurses in Total Sample Unable to Perform Specific Skills in Competency Group G at Required Level

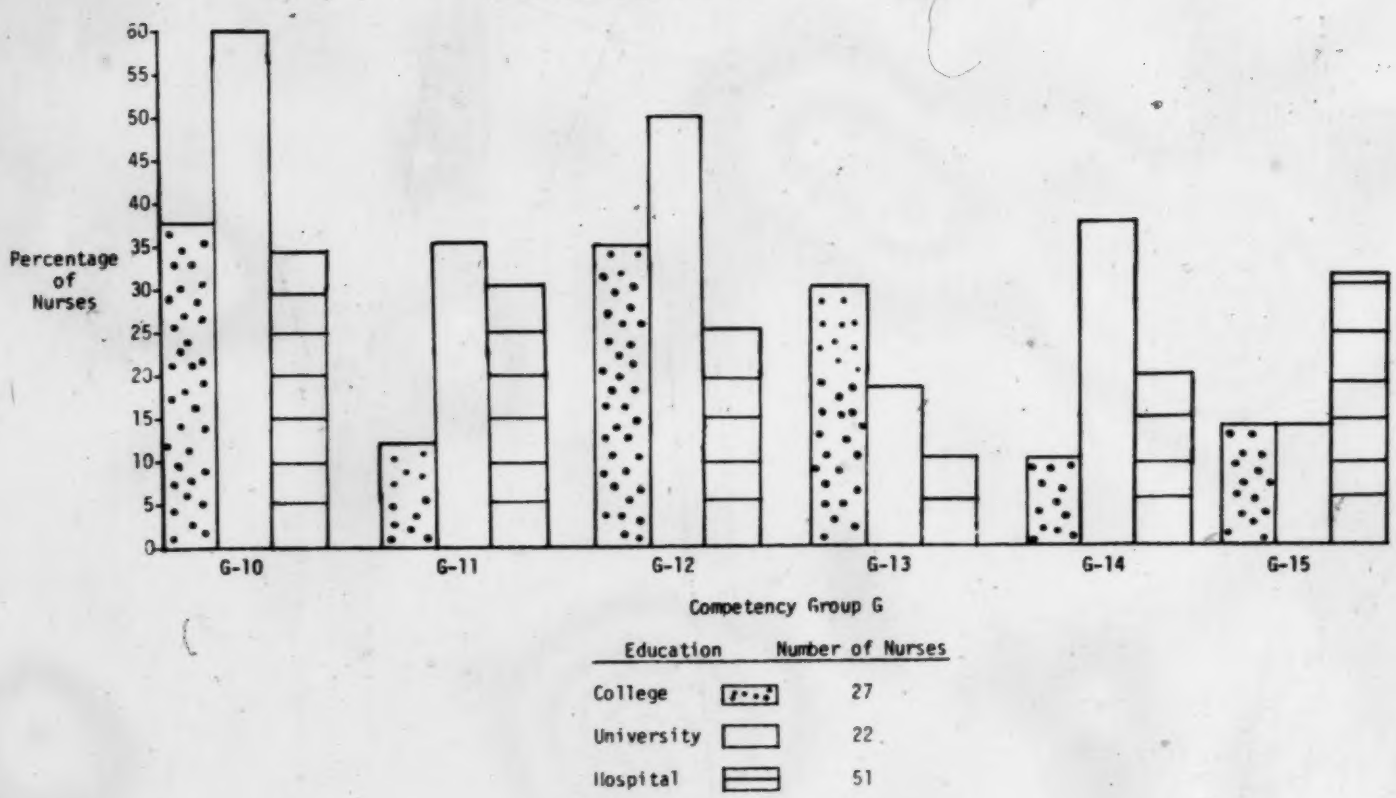


Figure 7 (continued)

Percentage of College, University and Hospital Prepared Nurses in Total Sample Unable to Perform Specific Skills in Competency Group G at Required Level

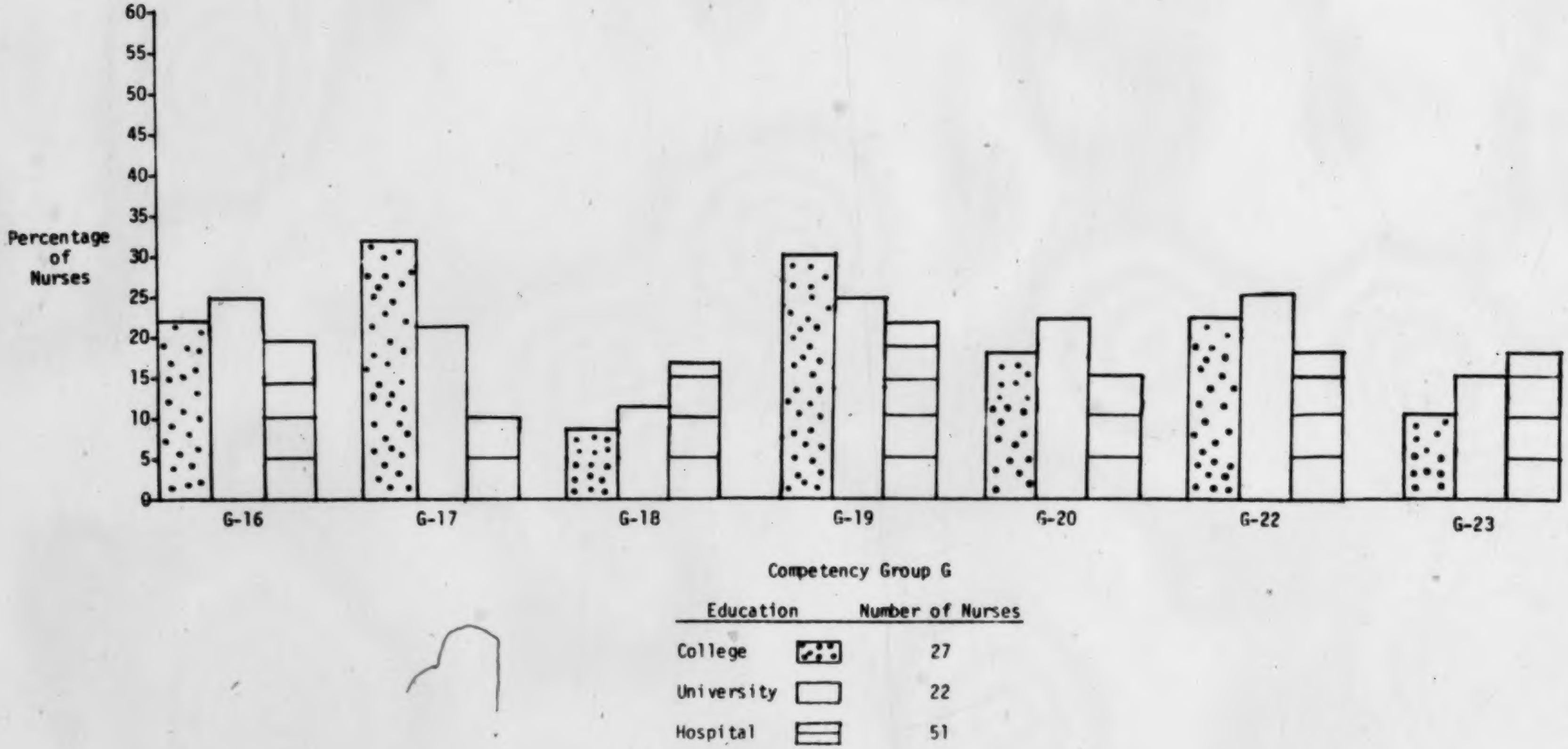


Figure 7 (continued)

Percentage of College, University and Hospital Prepared Nurses in Total Sample Unable to Perform Specific Skills in Competency Group G at Required Level

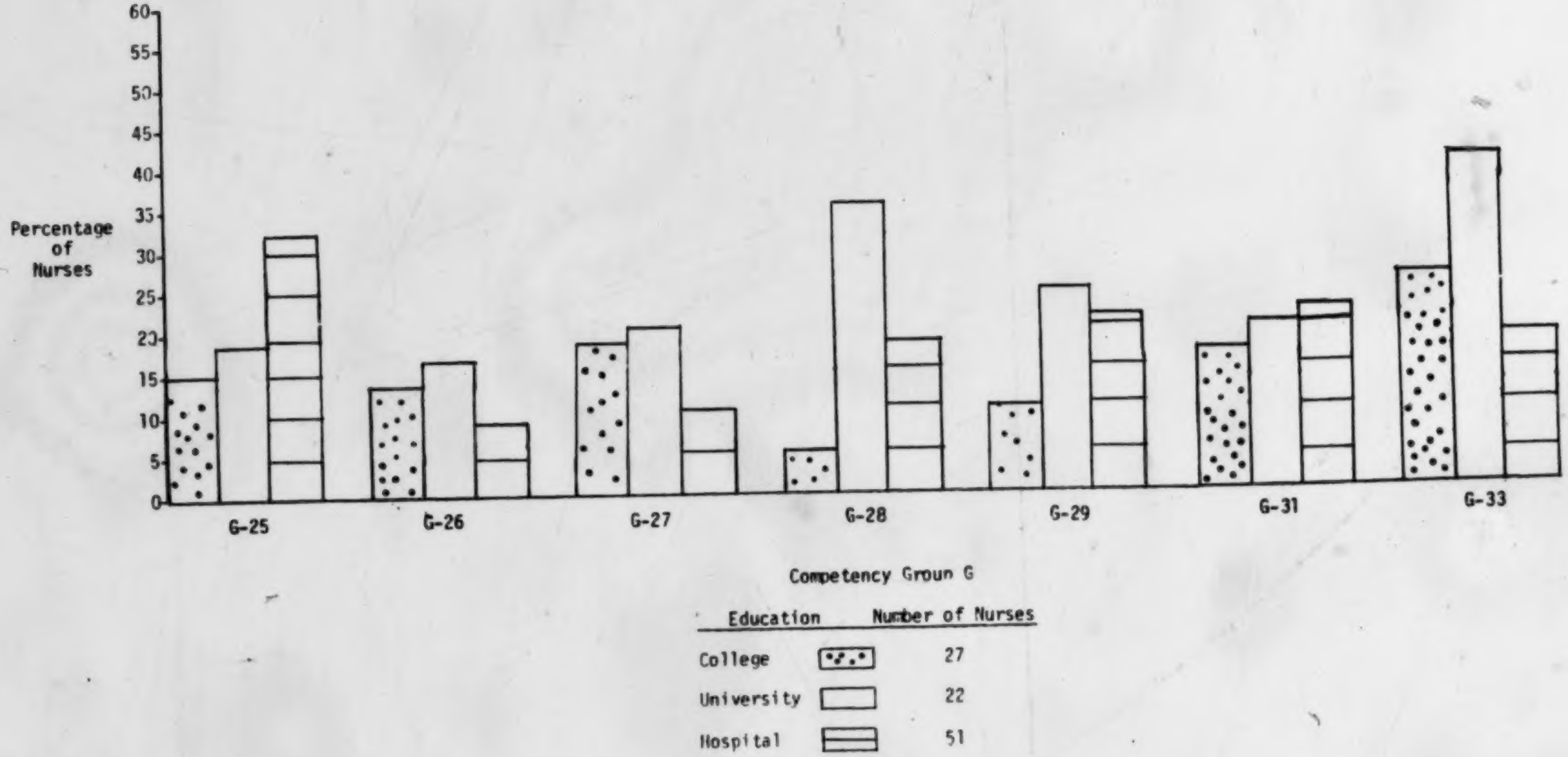


Figure 8

Percentage of College, University and Hospital Prepared Nurses in Total Sample Unable to Perform Specific Skills in Competency Group H at Required Level

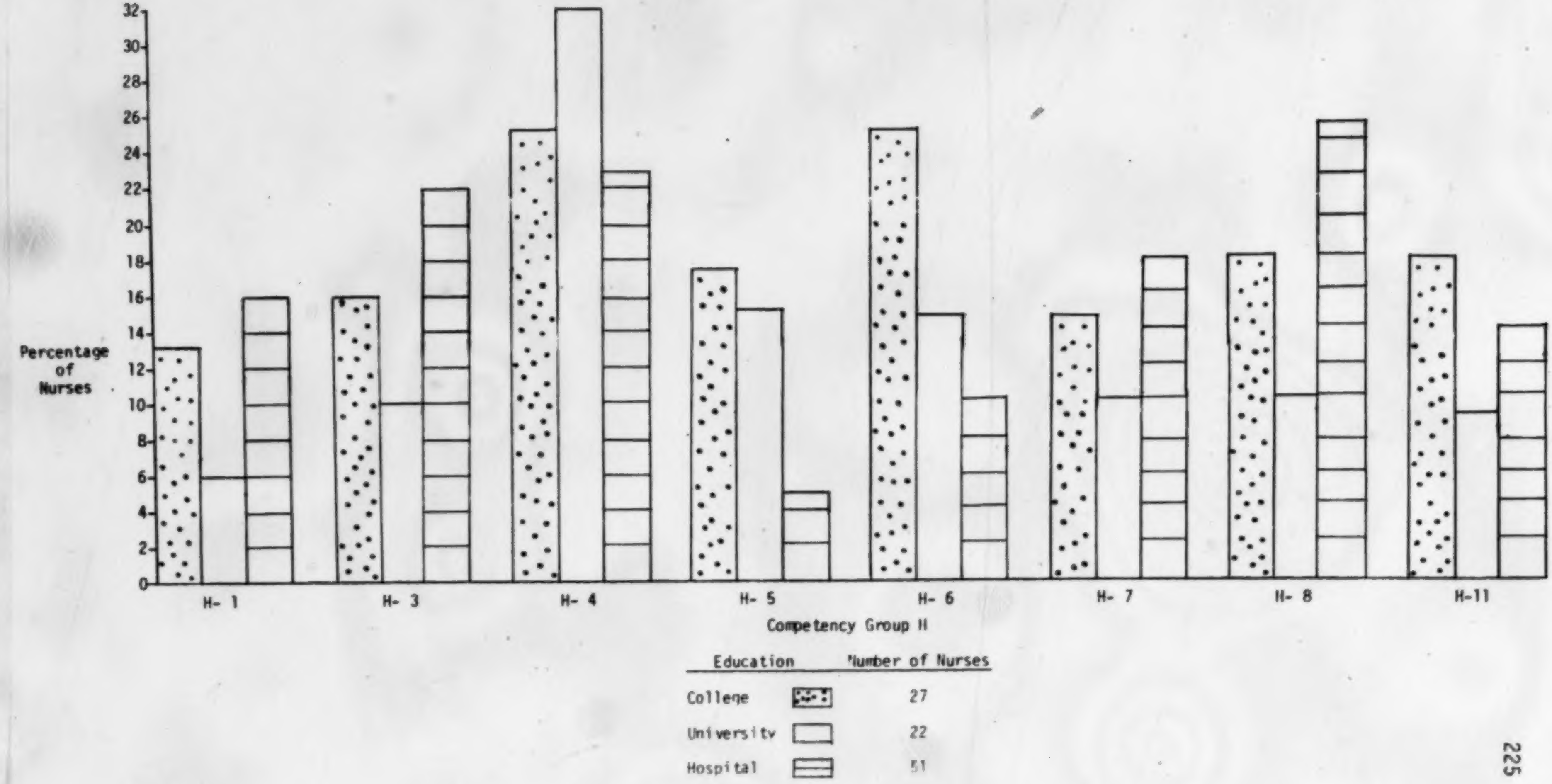


Figure 9

Percentage of College, University and Hospital Prepared Nurses in Total Sample Unable to Perform Specific Skills in Competency Group I at Required Level

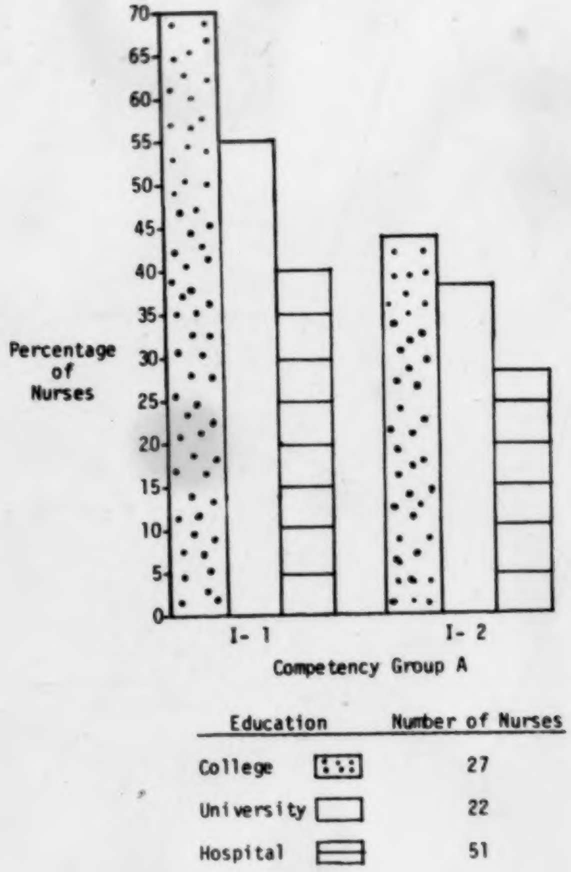
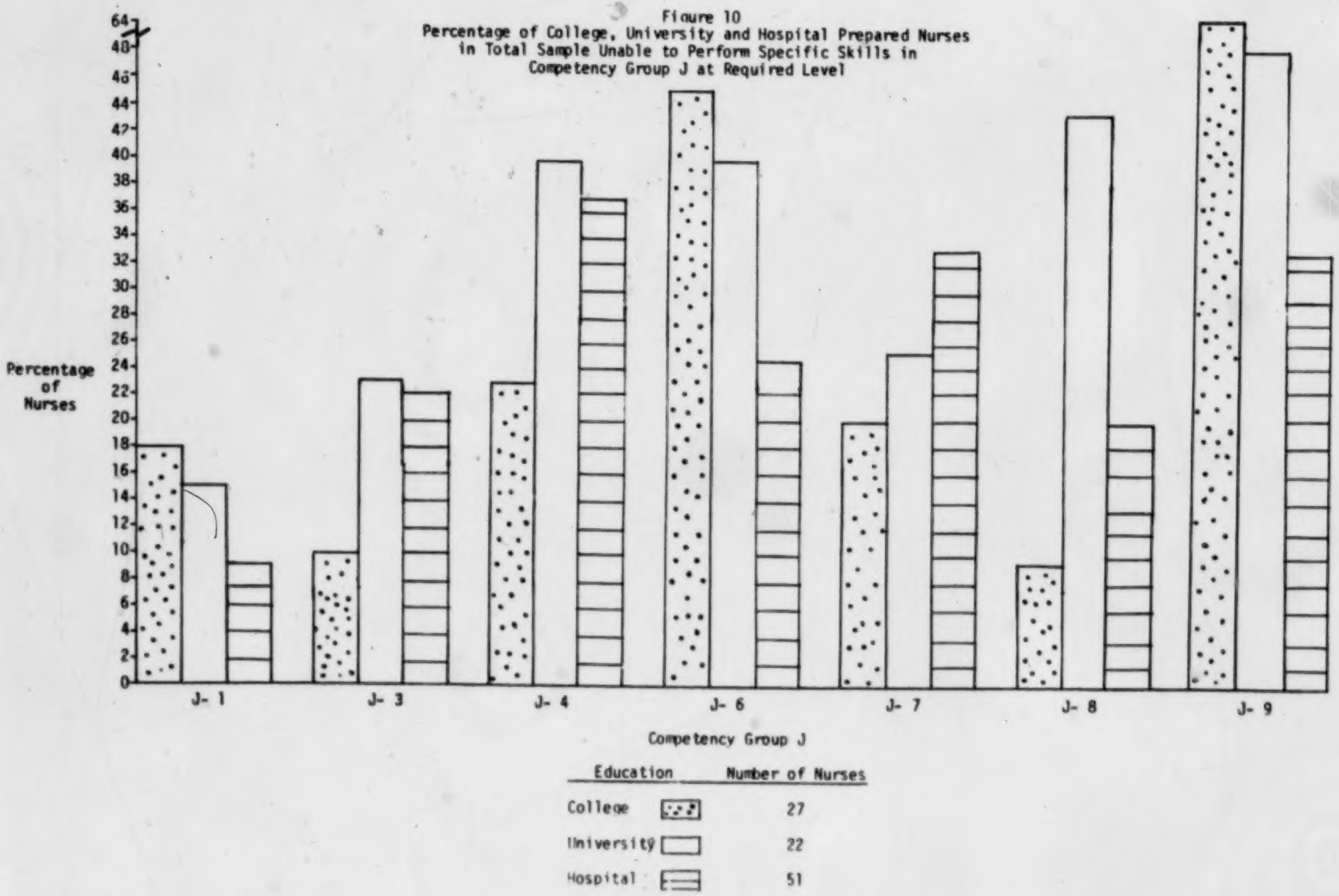


Figure 10
Percentage of College, University and Hospital Prepared Nurses in Total Sample Unable to Perform Specific Skills in Competency Group J at Required Level

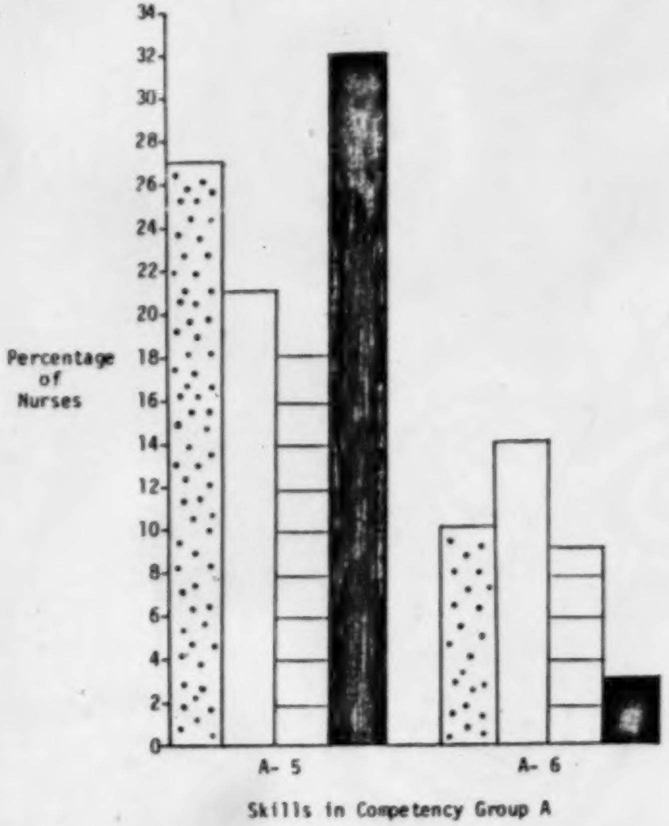


APPENDIX J

COMPARISON OF RESPONDENTS' ABILITIES TO PERFORM SELECTED SKILLS IN THE TEN COMPETENCY GROUPS IN RELATION TO YEARS OF EXPERIENCE

Figure 11

Percentage of Nurses According to Experience Unable to Perform Specific Skills in Competency Group A at Required Level



Number of Nurses		Years of Experience
47	▨	0
14	☐	1 - 2
11	⊟	3 - 5
28	■	> 5

Figure 12

Percentage of Nurses According to Experience Unable to Perform Specific Skills in Competency Group C at Required Level

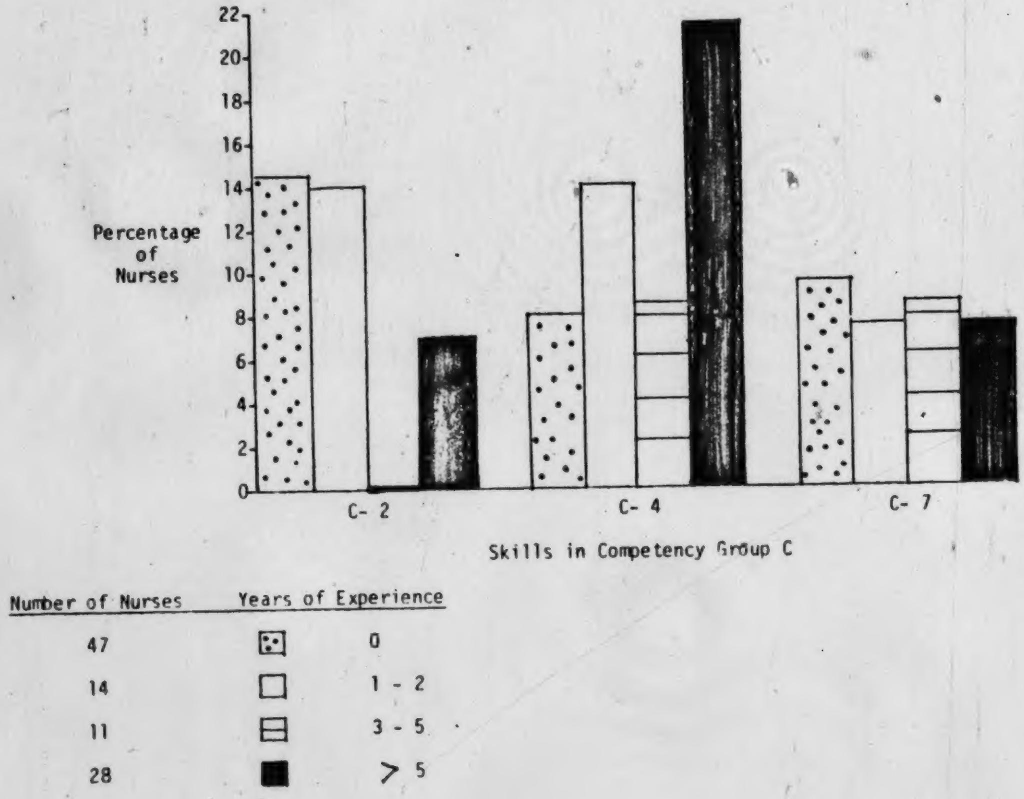


Figure 13

Percentage of Nurses According to Experience Unable to Perform Specific Skills in Competency Group D at Required Level

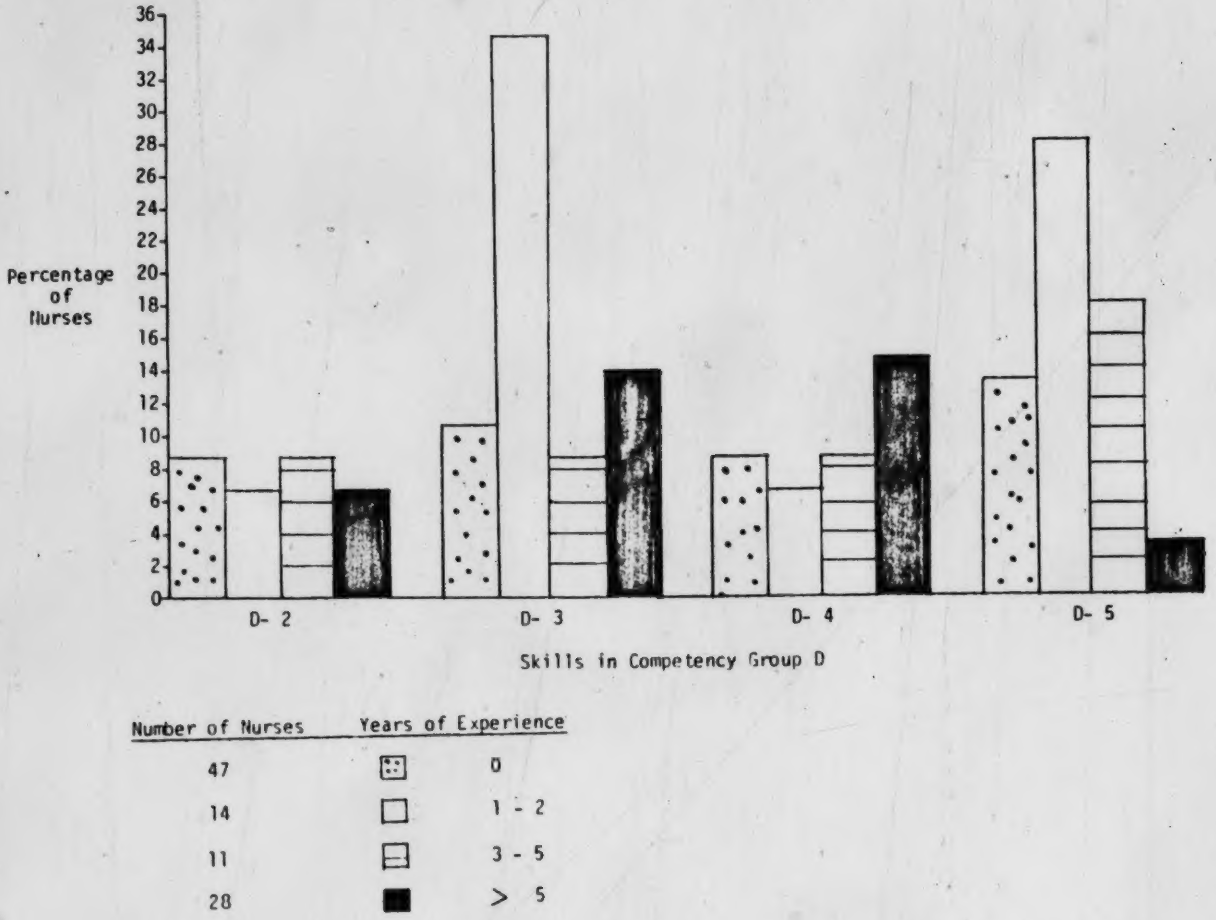


Figure 13 (continued)

Percentage of Nurses According to Experience Unable to Perform Specific Skills in Competency Group D at Required Level

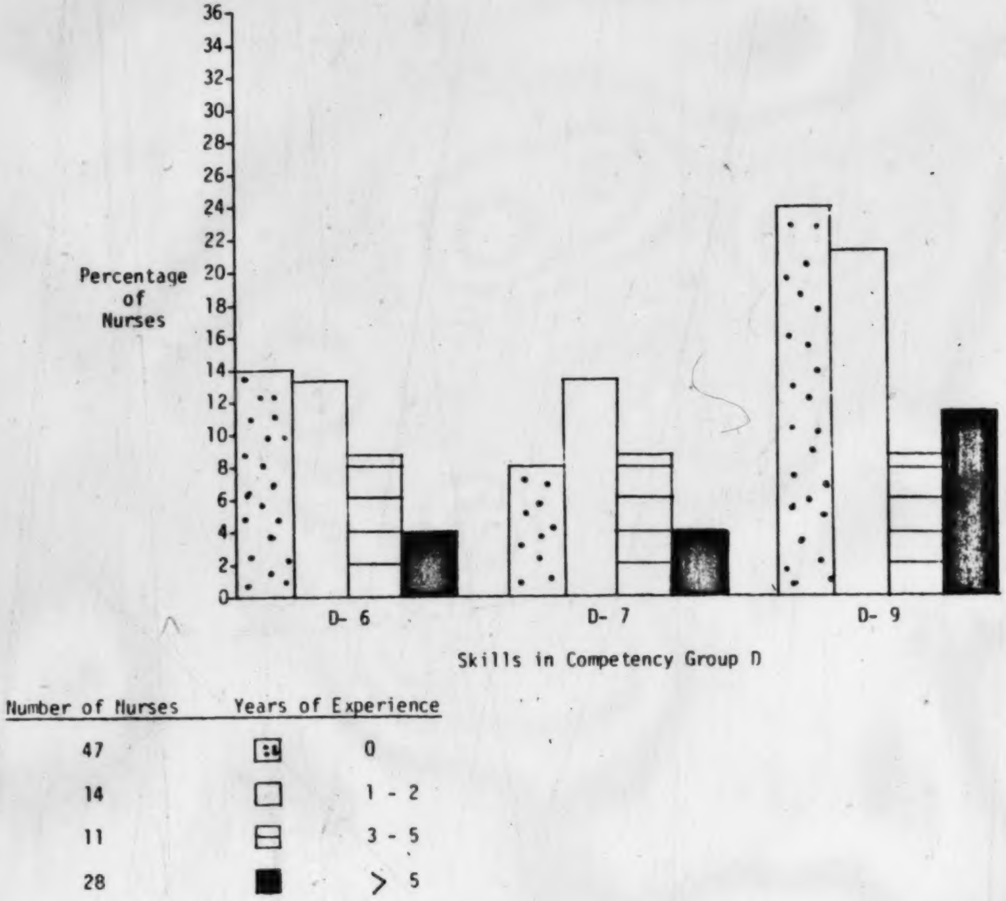


Figure 14

Percentage of Nurses According to Experience Unable to Perform Specific Skills in Competency Group E at Required Level

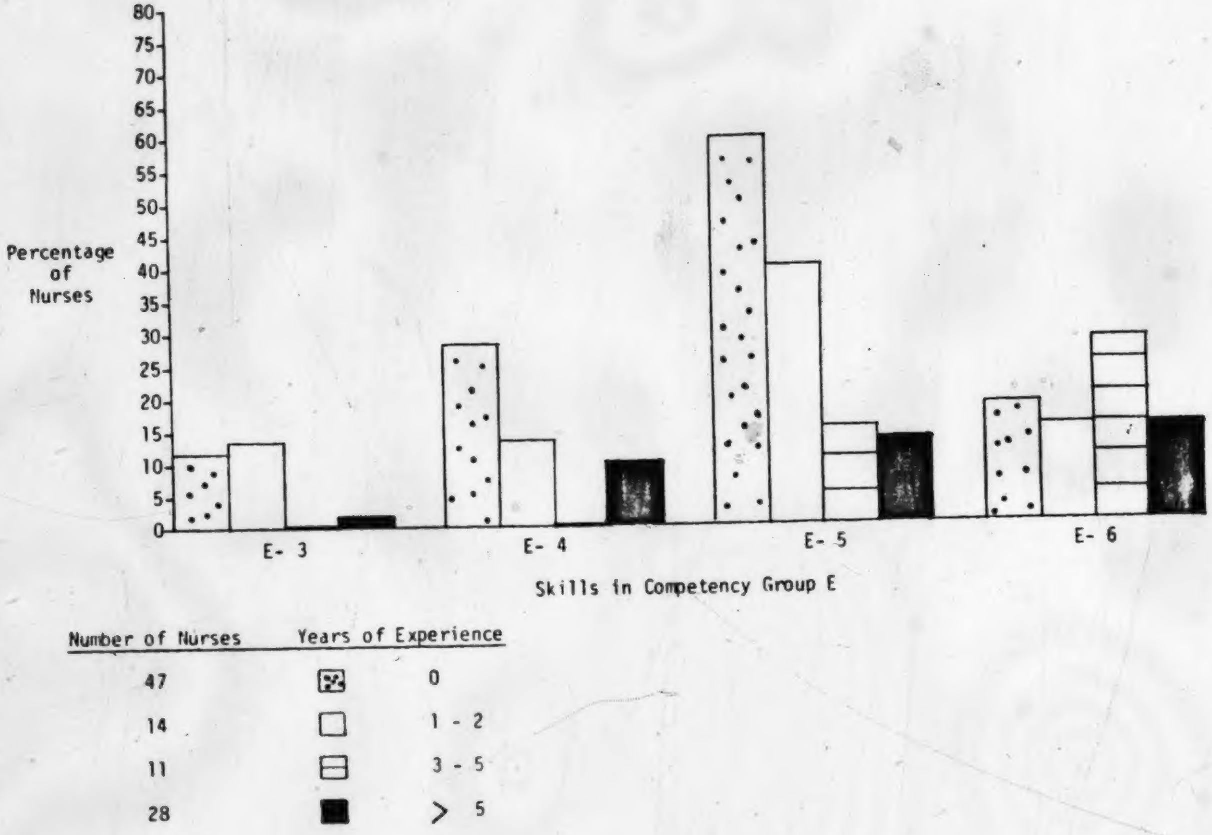


Figure 14 (continued)

Percentage of Nurses According to Experience Unable to Perform Specific SKills in Competency Group E at Required Level

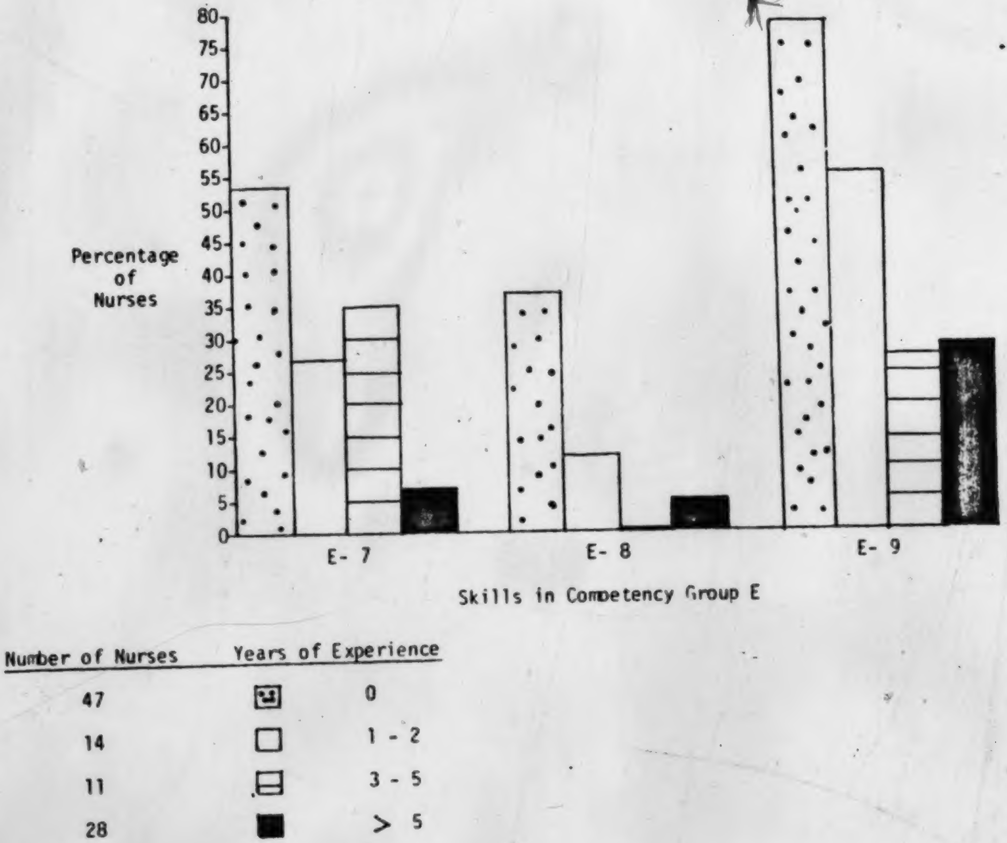


Figure 15

Percentage of Nurses According to Experience Unable to Perform Specific Skills in Competency Group F at Required Level

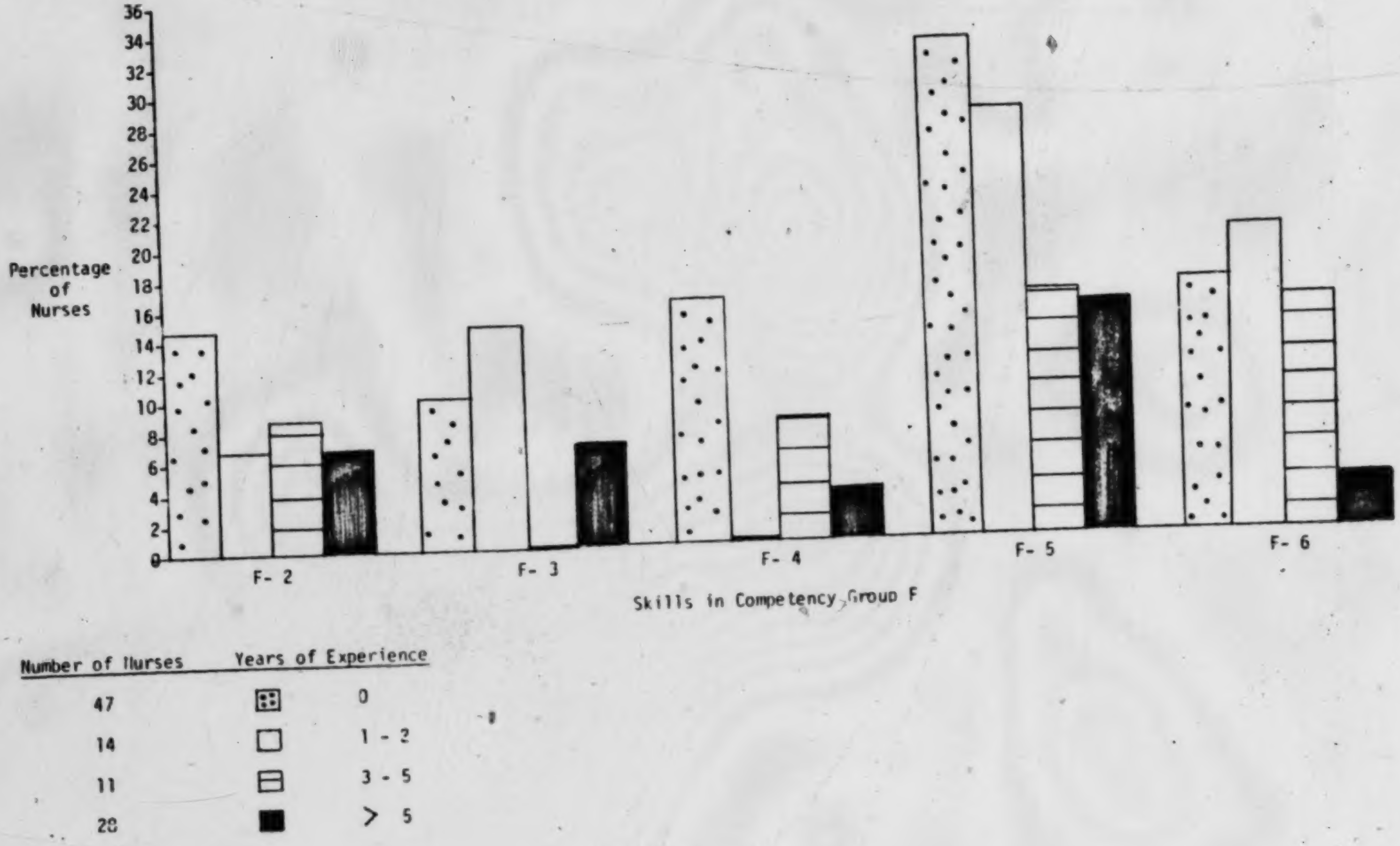


Figure 15 (continued)

Percentage of Nurses According to Experience Unable to Perform Specific Skills in Competency Group F at Required Level

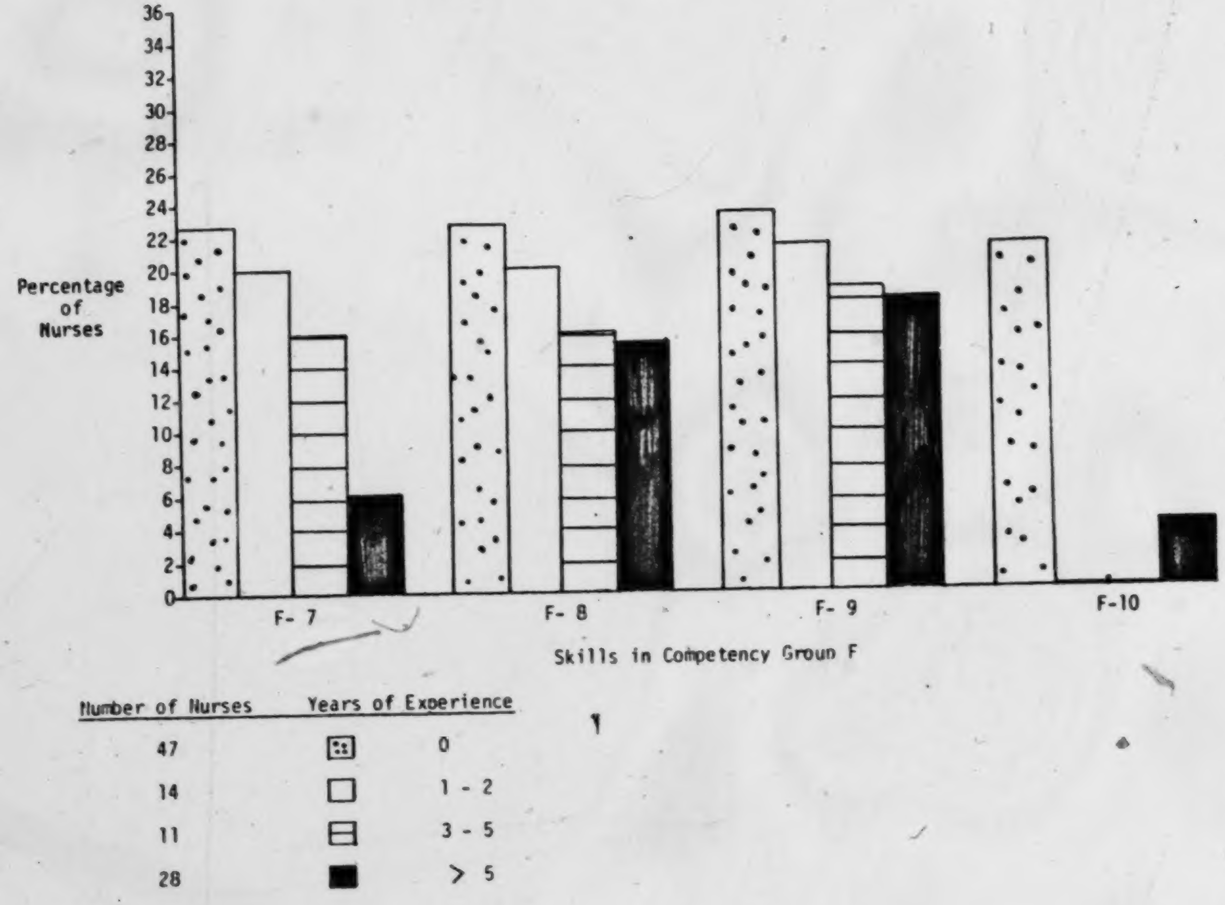


Figure 15 (continued)

Percentage of Nurses According to Experience Unable to Perform Specific Skills in Competency Group F at Required Level

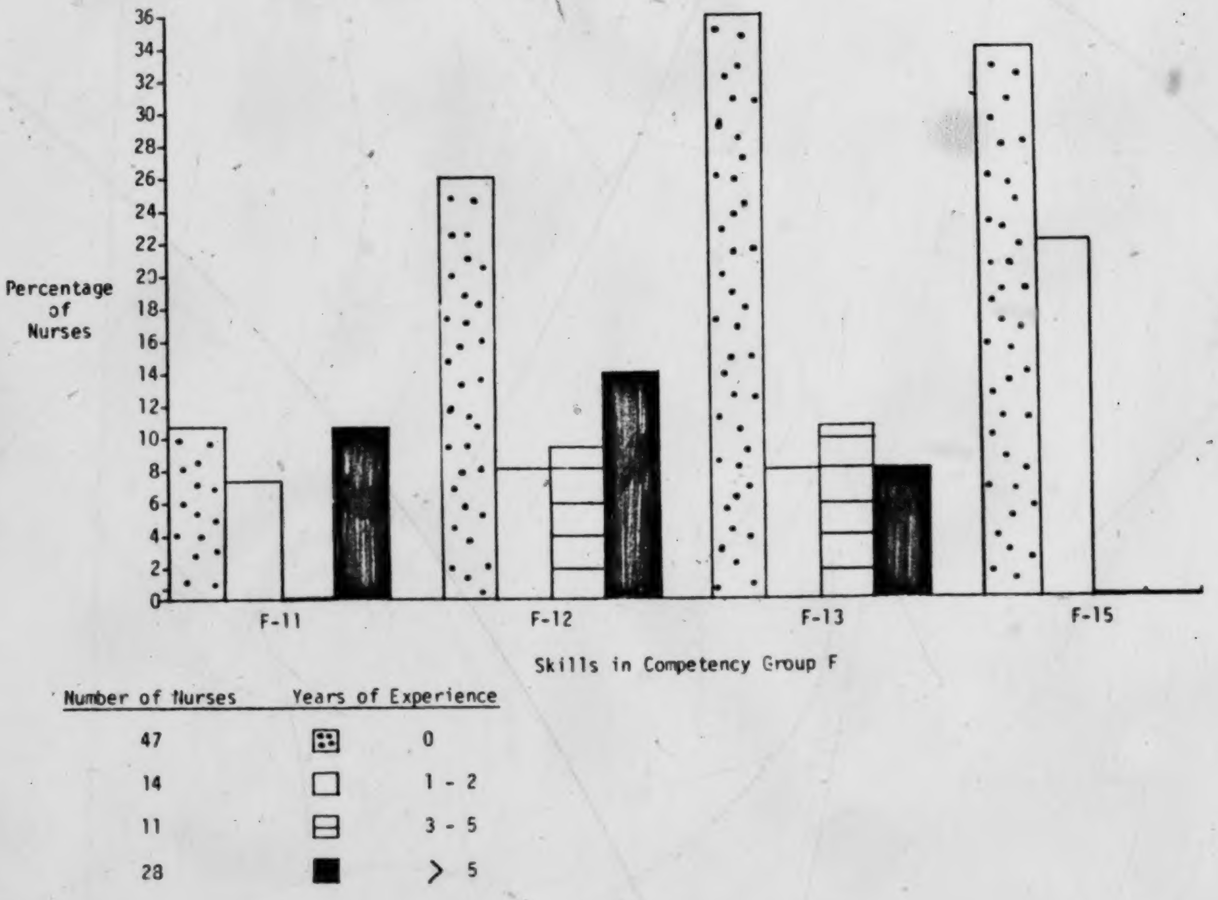


Figure 16

Percentage of Nurses According to Experience Unable to Perform Specific Skills in Competency Group G at Required Level

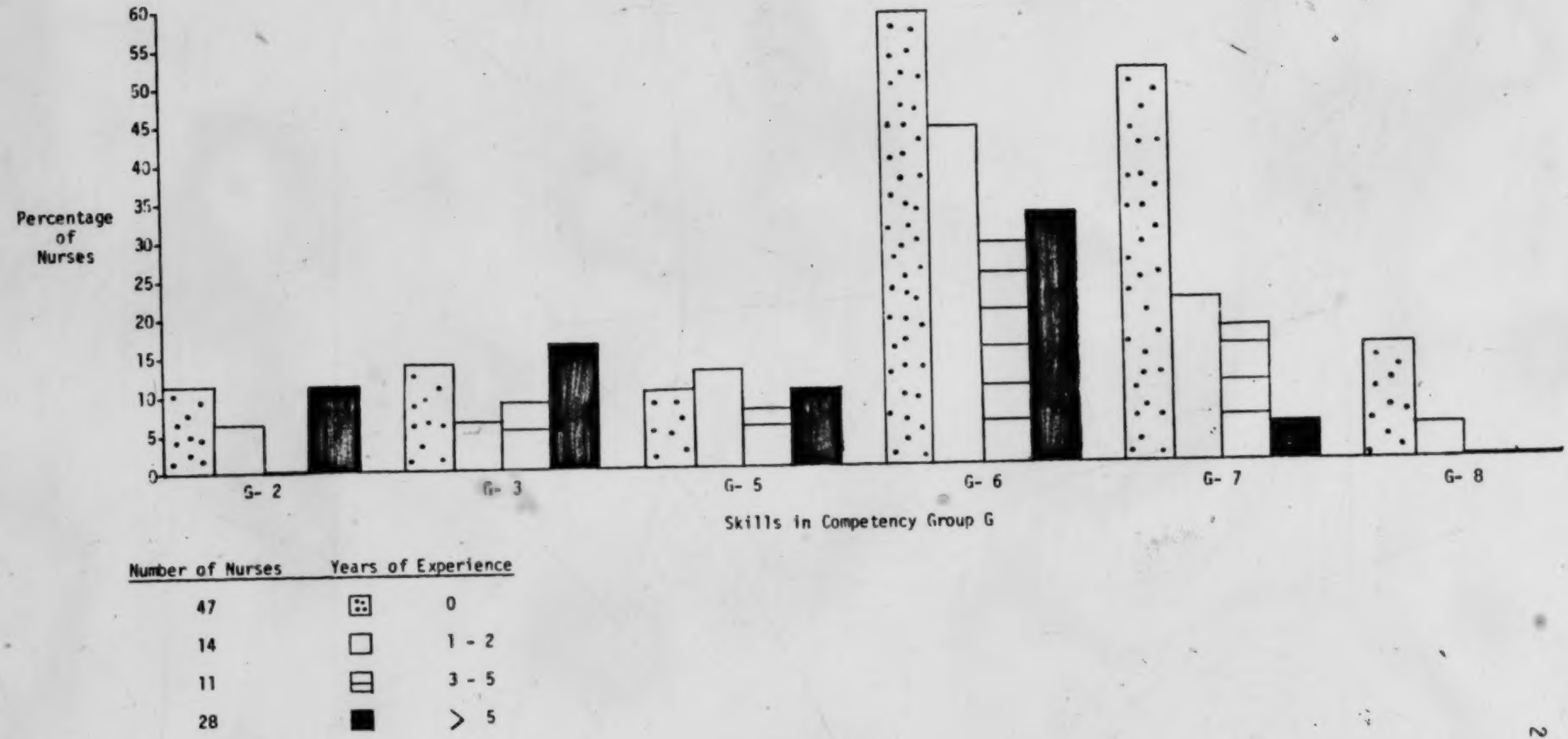


Figure 16 (continued)

Percentage of Nurses According to Experience Unable to Perform Specific Skills in Competency Group G at Required Level

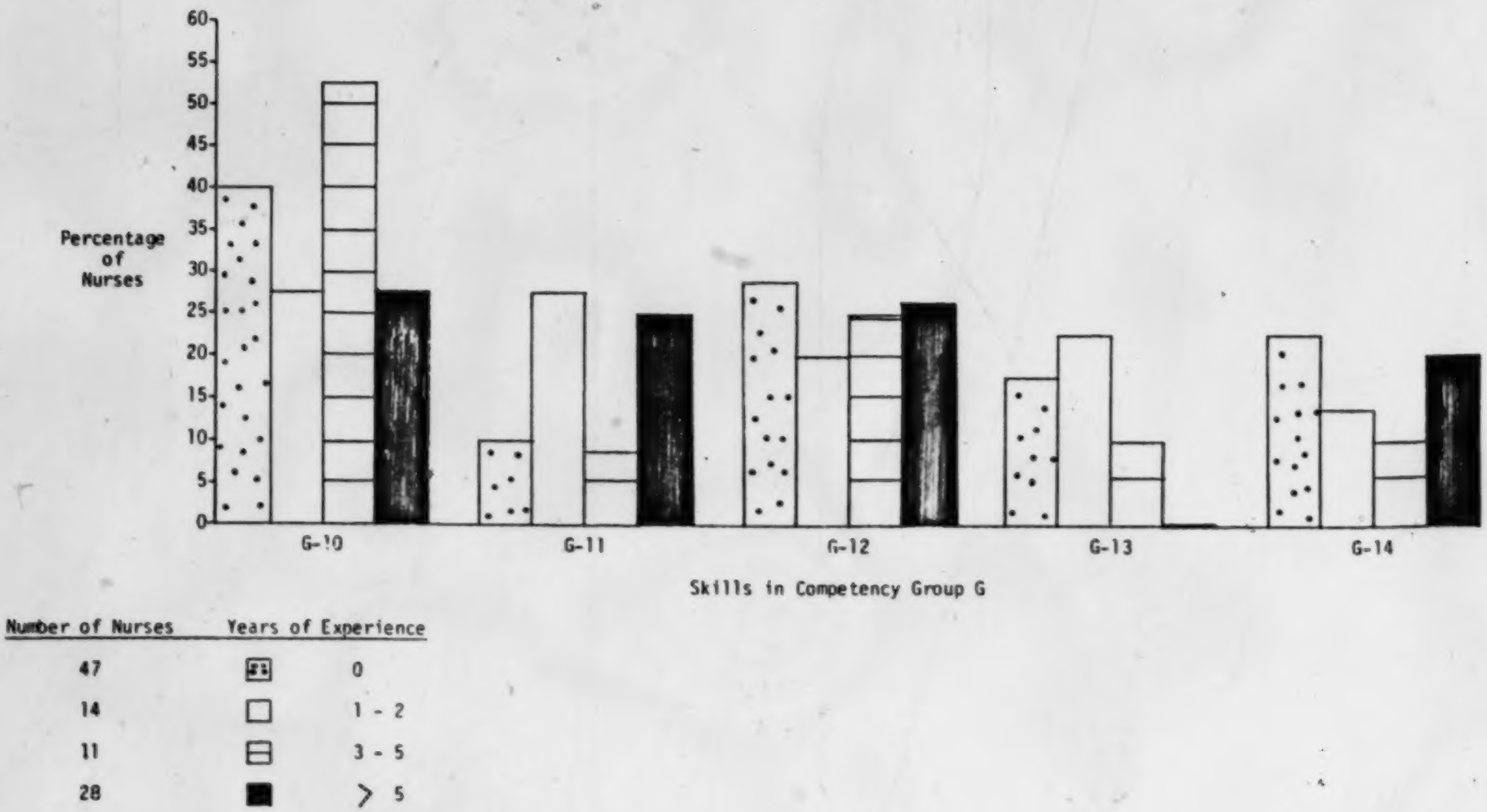


Figure 16 (continued)

Percentage of Nurses According to Experience Unable to Perform Specific Skills in Competency Group G at Required Level

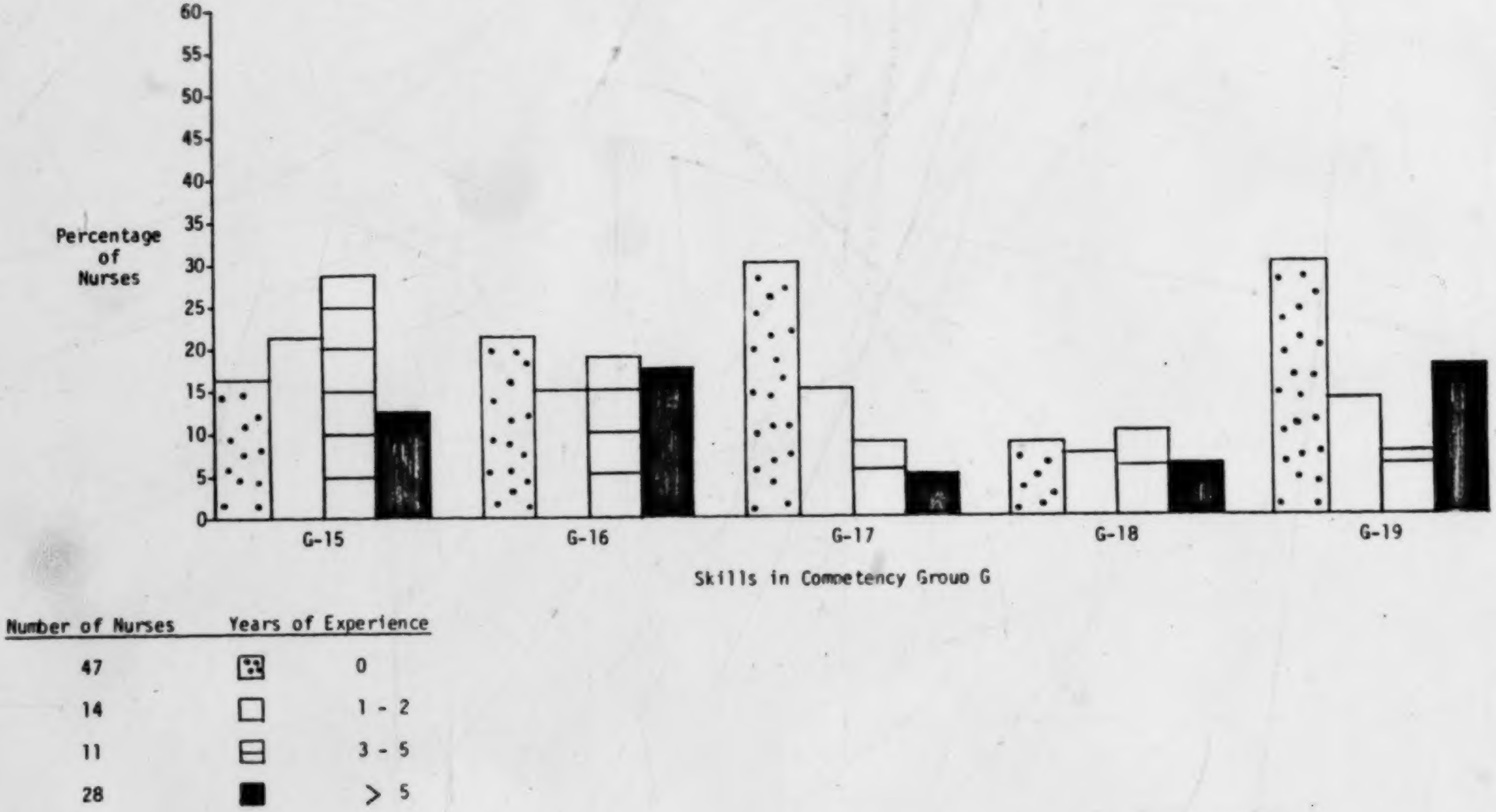


Figure 16 (continued)

Percentage of Nurses According to Experience Unable to Perform Specific Skills in Competency Group G at Required Level

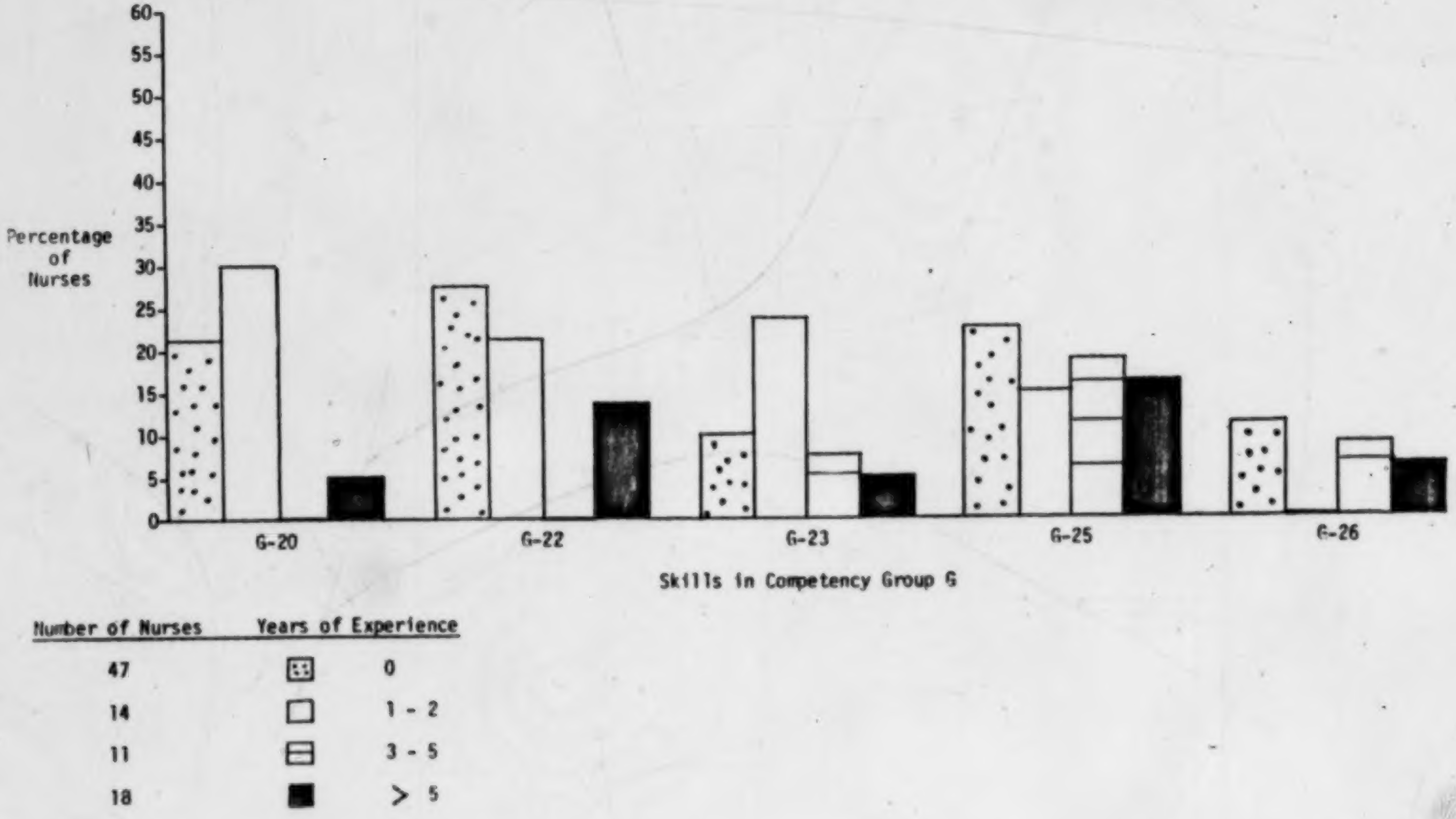


Figure 16 (continued)

Percentage of Nurses According to Experience Unable to Perform Specific Skills in Competency Group G at Required Level

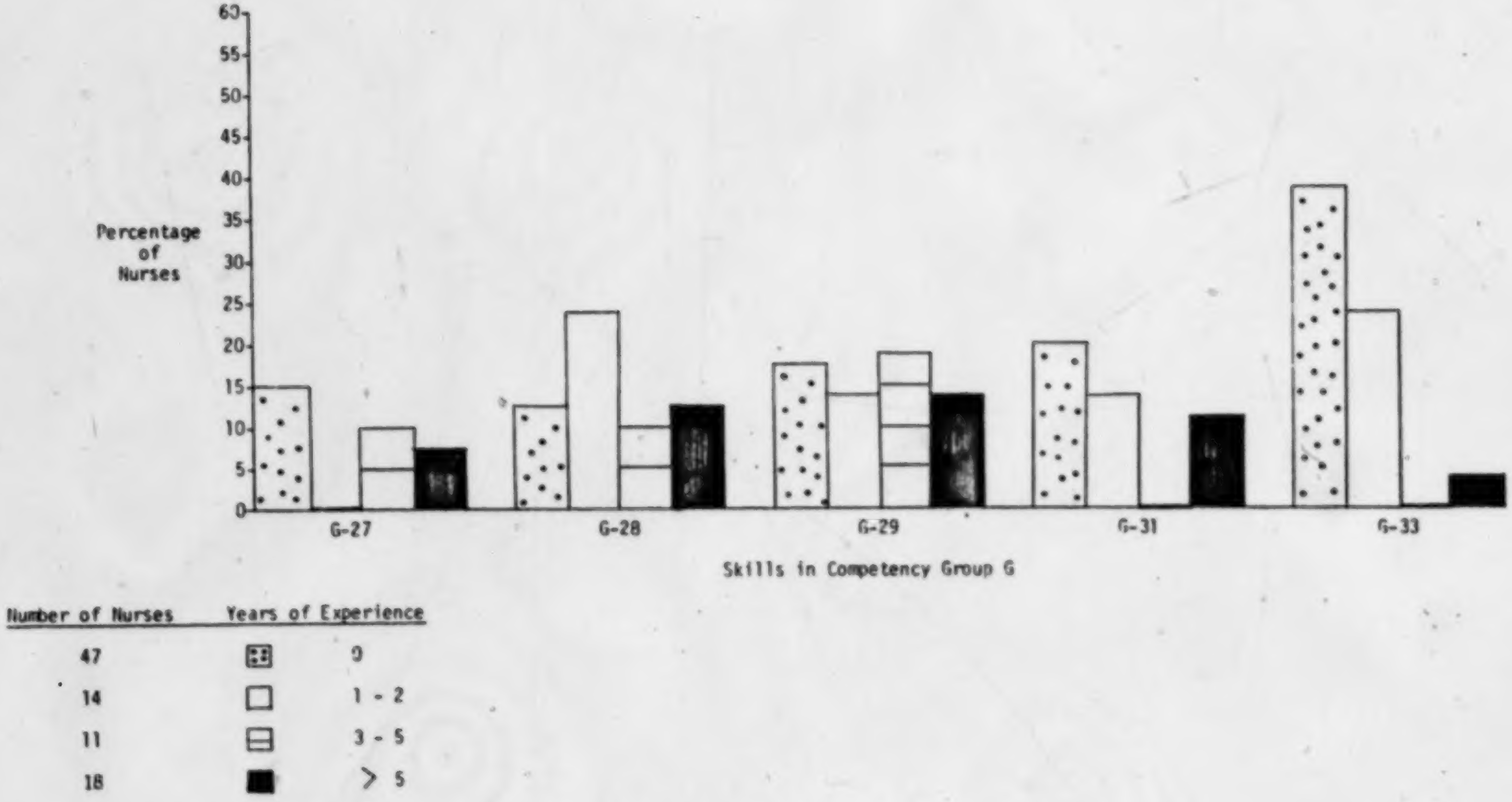


Figure 17

Percentage of Nurses According to Experience Unable to Perform Specific Skills in Competency Group H at Required Level

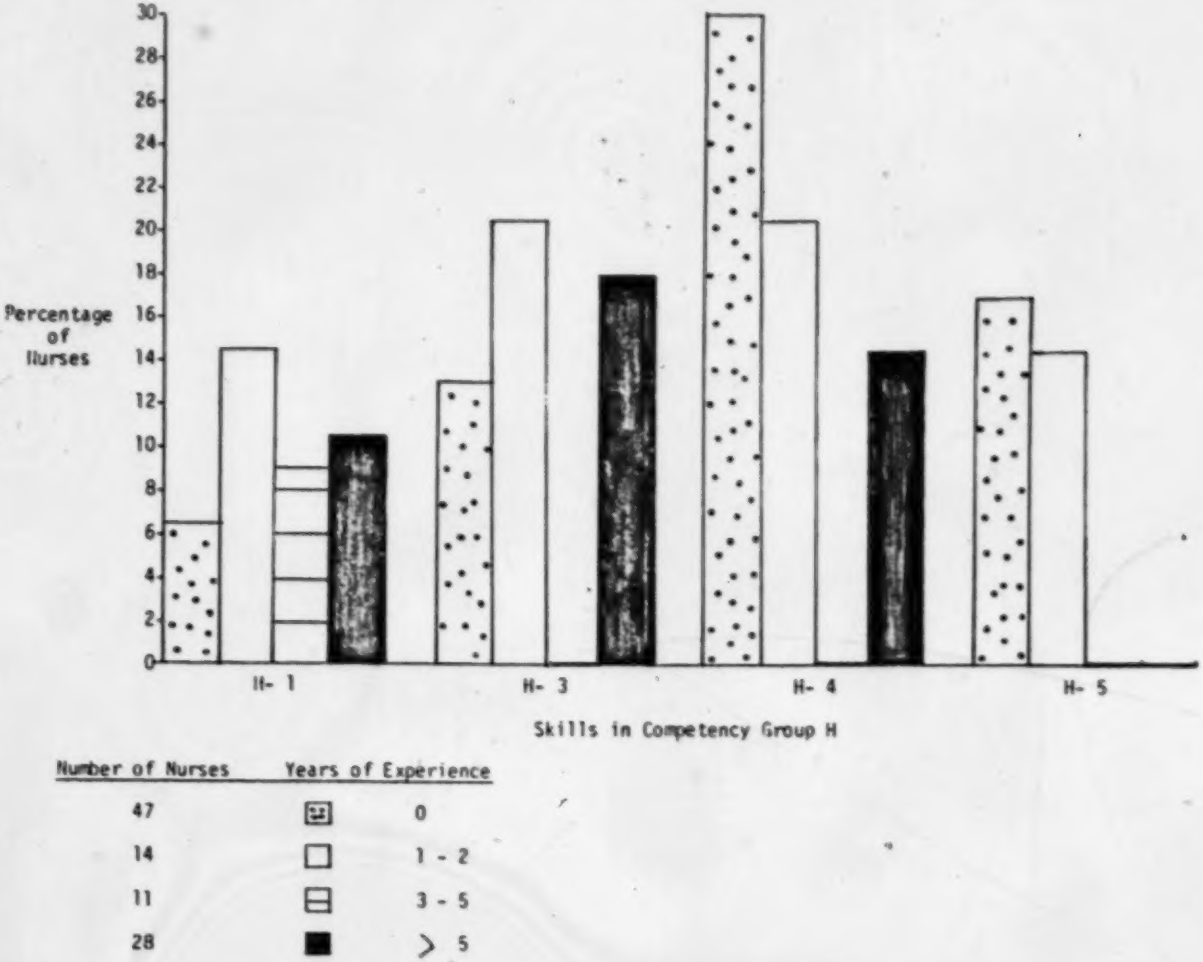


Figure 17 (continued)

Percentage of Nurses According to Experience Unable to Perform Specific Skills in Competency Group H at Required Level

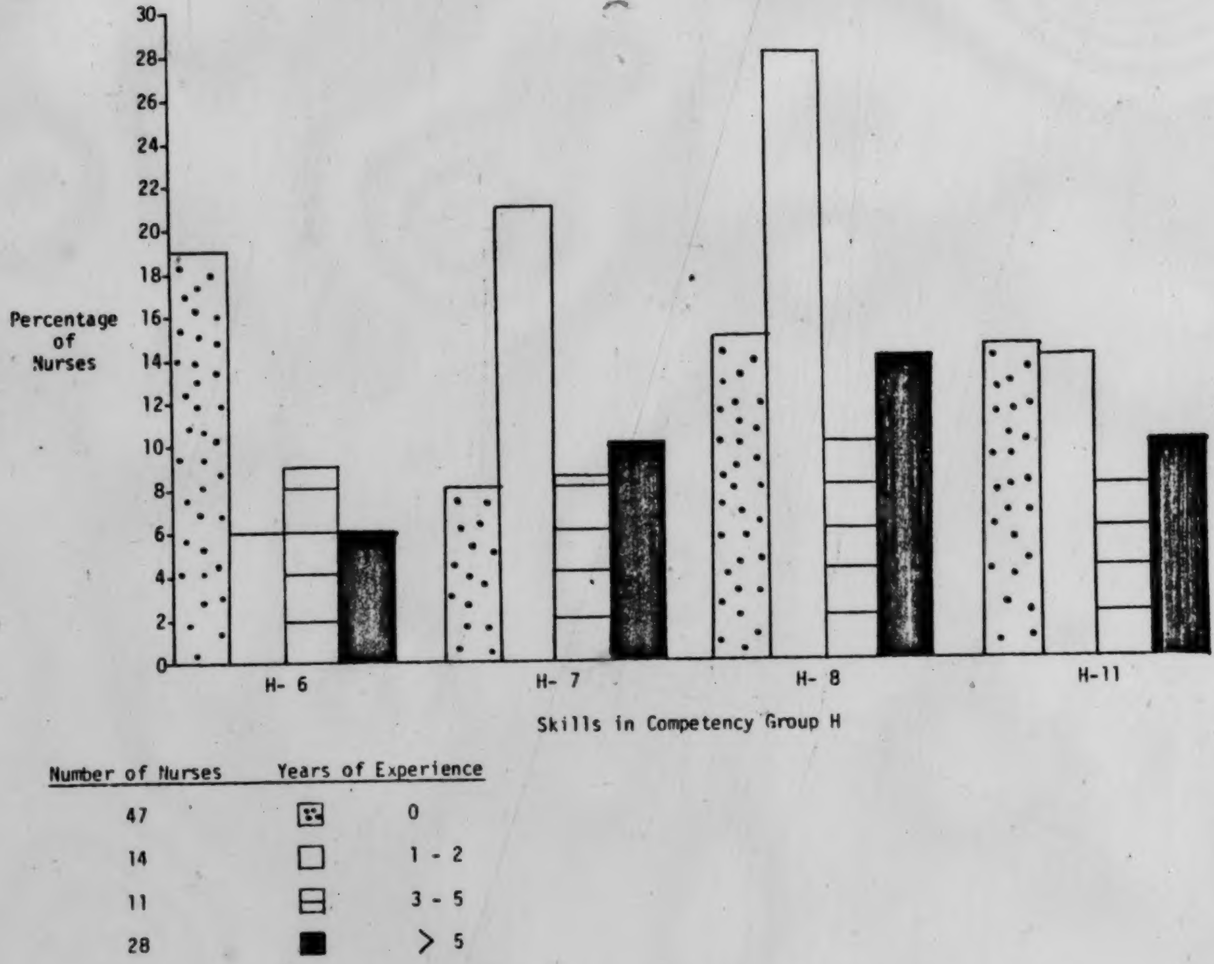


Figure 18

Percentage of Nurses According to Experience Unable to Perform Specific Skills in Competency Group I at Required Level

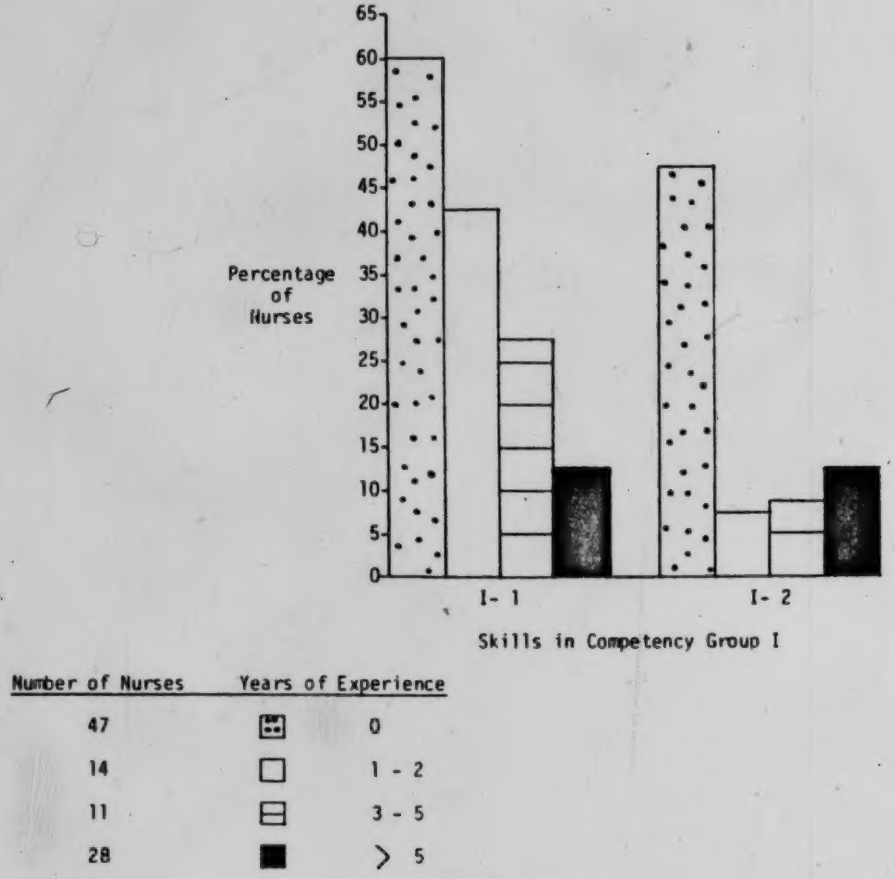


Figure 19

Percentage of Nurses According to Experience Unable to Perform Specific Skills in Competency Group J at Required Level

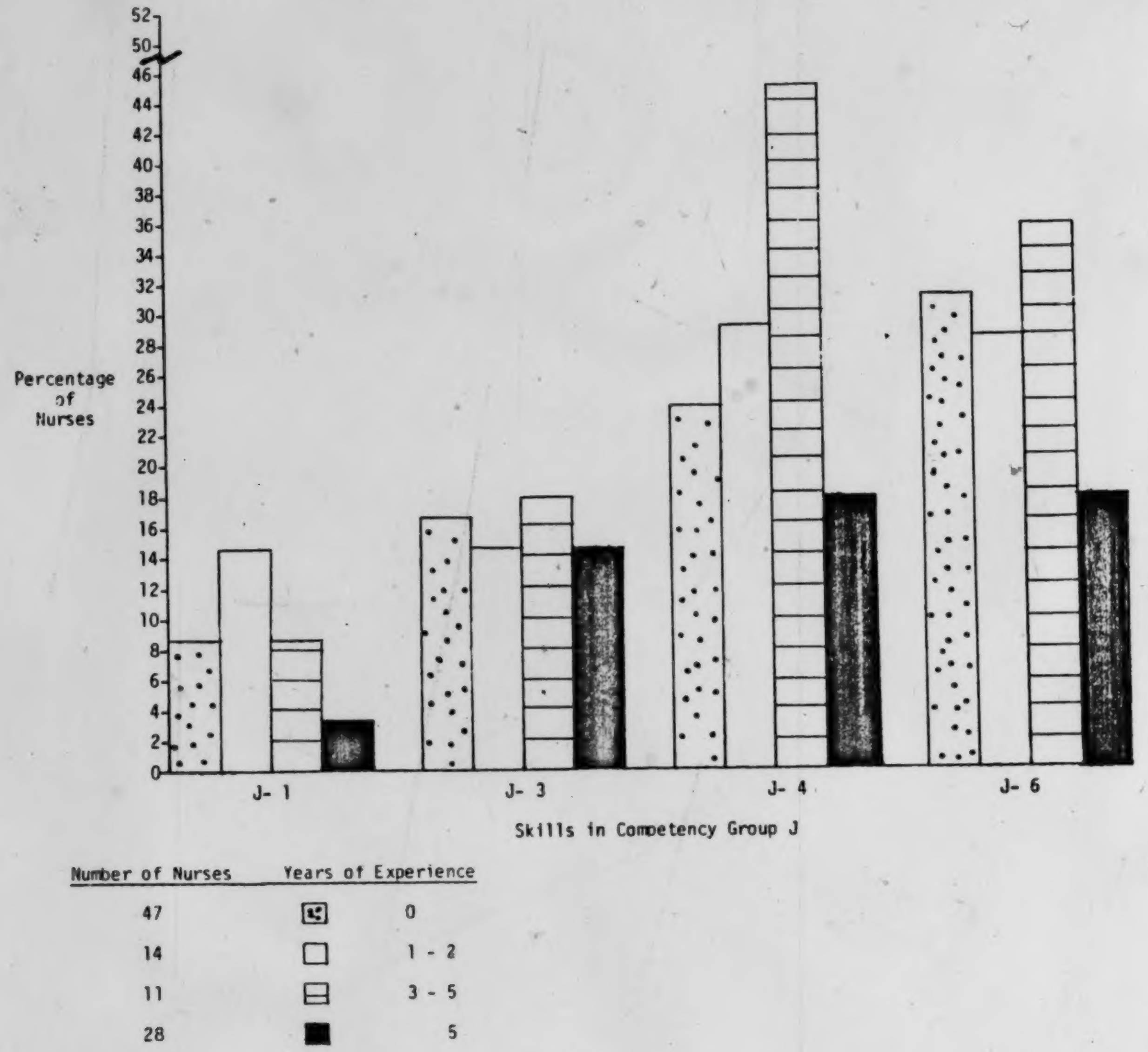
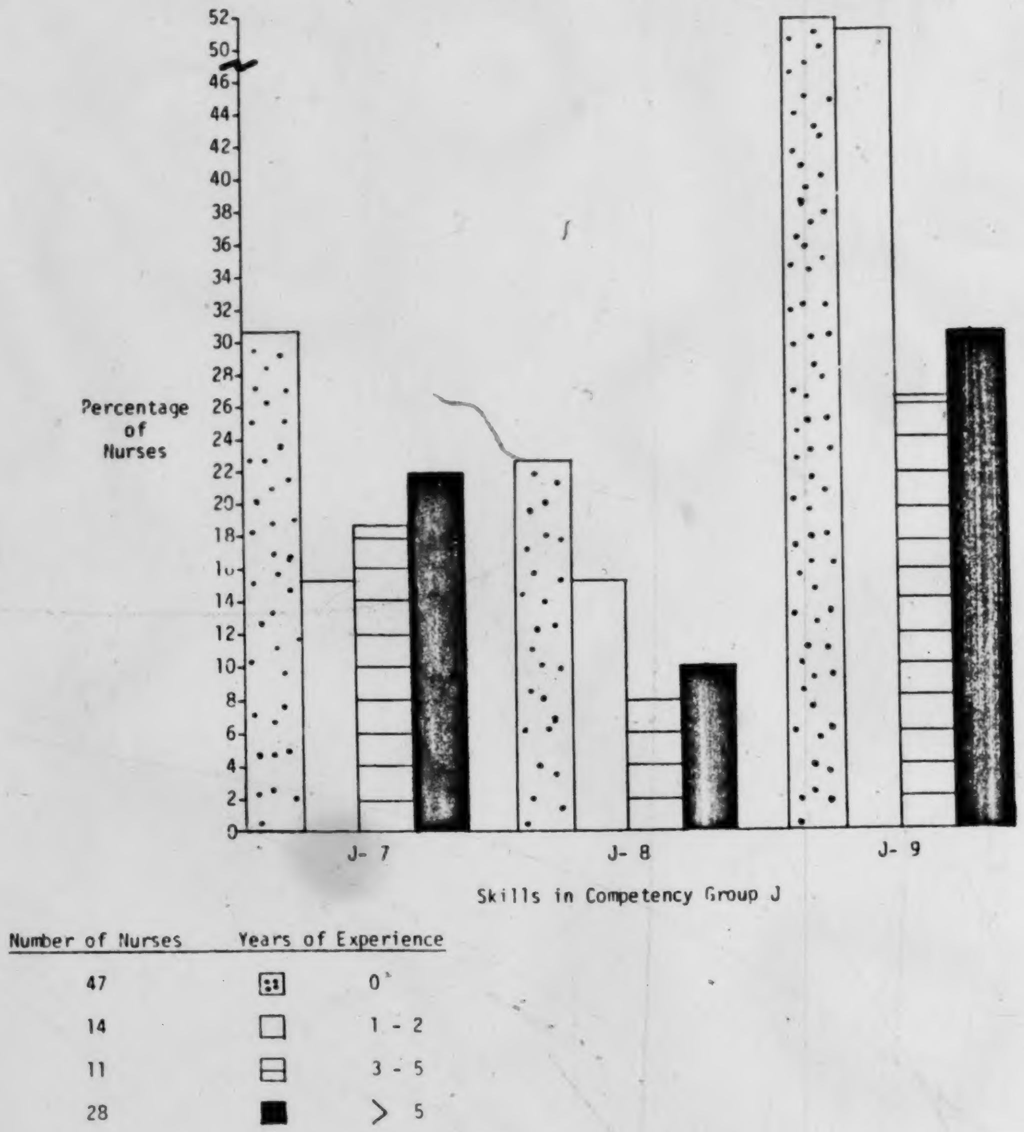


Figure 13 (continued)

Percentage of Nurses According to Experience Unable to Perform Specific Skills in Competency Group J at Required Level



APPENDIX K

COMPARISON OF RESPONDENTS WITH NO EXPERIENCE AND THEIR ABILITIES TO PERFORM SPECIFIC SKILLS IN THE TEN COMPETENCY GROUPS IN RELATION TO EDUCATIONAL PREPARATION

Figure 20

Percentage of College, University and Hospital Prepared Nurses With no Experience Unable to Perform Specific Skills in Competency Group A at Required Level

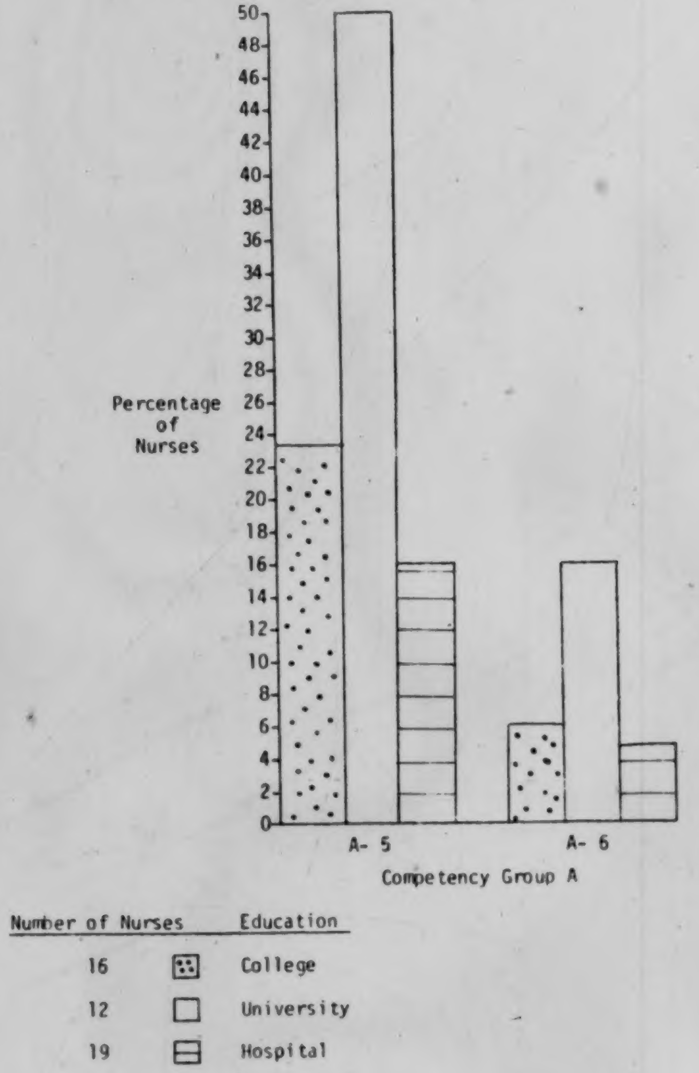


Figure 21

Percentage of College, University and Hospital Prepared Nurses With No Experience Unable to Perform Specific Skills in Competency Group C at Required Level

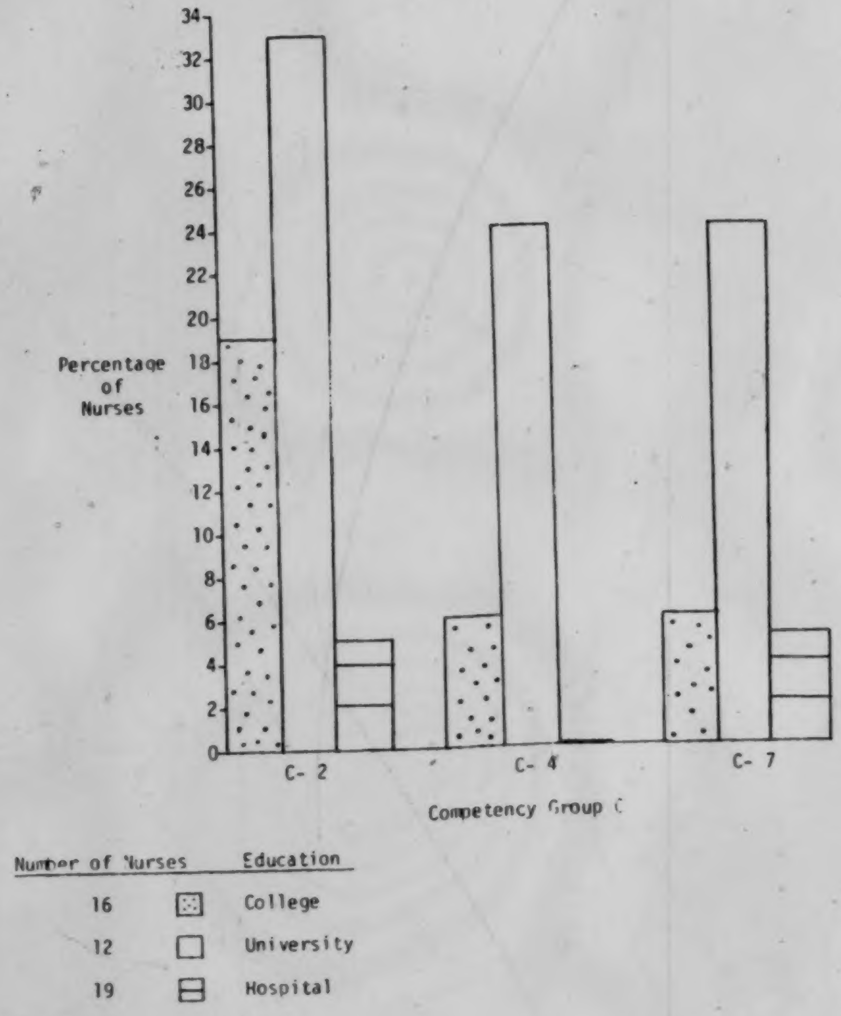


Figure 22

Percentage of College, University and Hospital Prepared Nurses With No Experience Unable to Perform Specific Skills in Competency Group D at Required Level

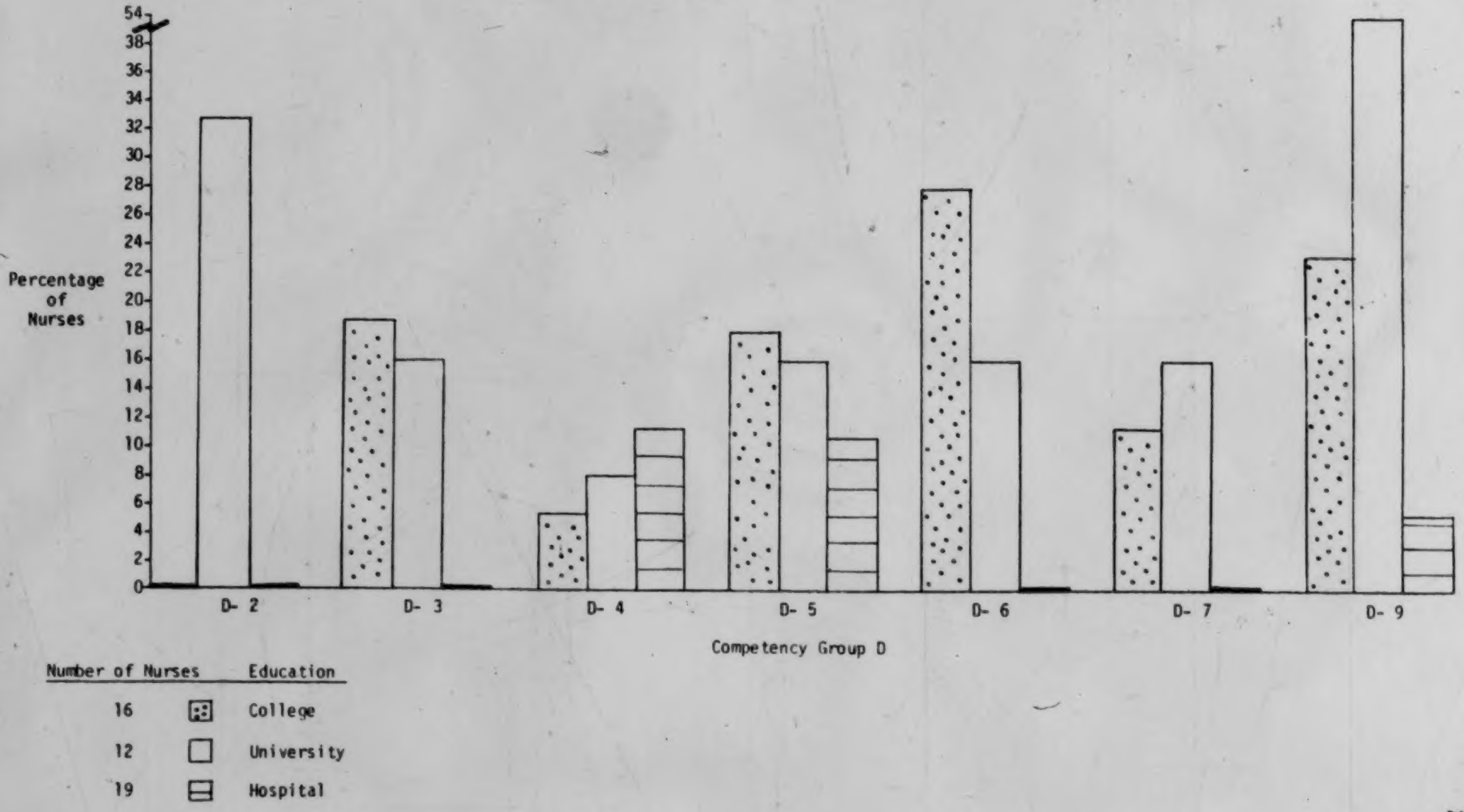


Figure 23

Percentage of College, University and Hospital Prepared Nurses
With No Experience Unable to Perform Specific Skills in
Competency Group E at Required Level

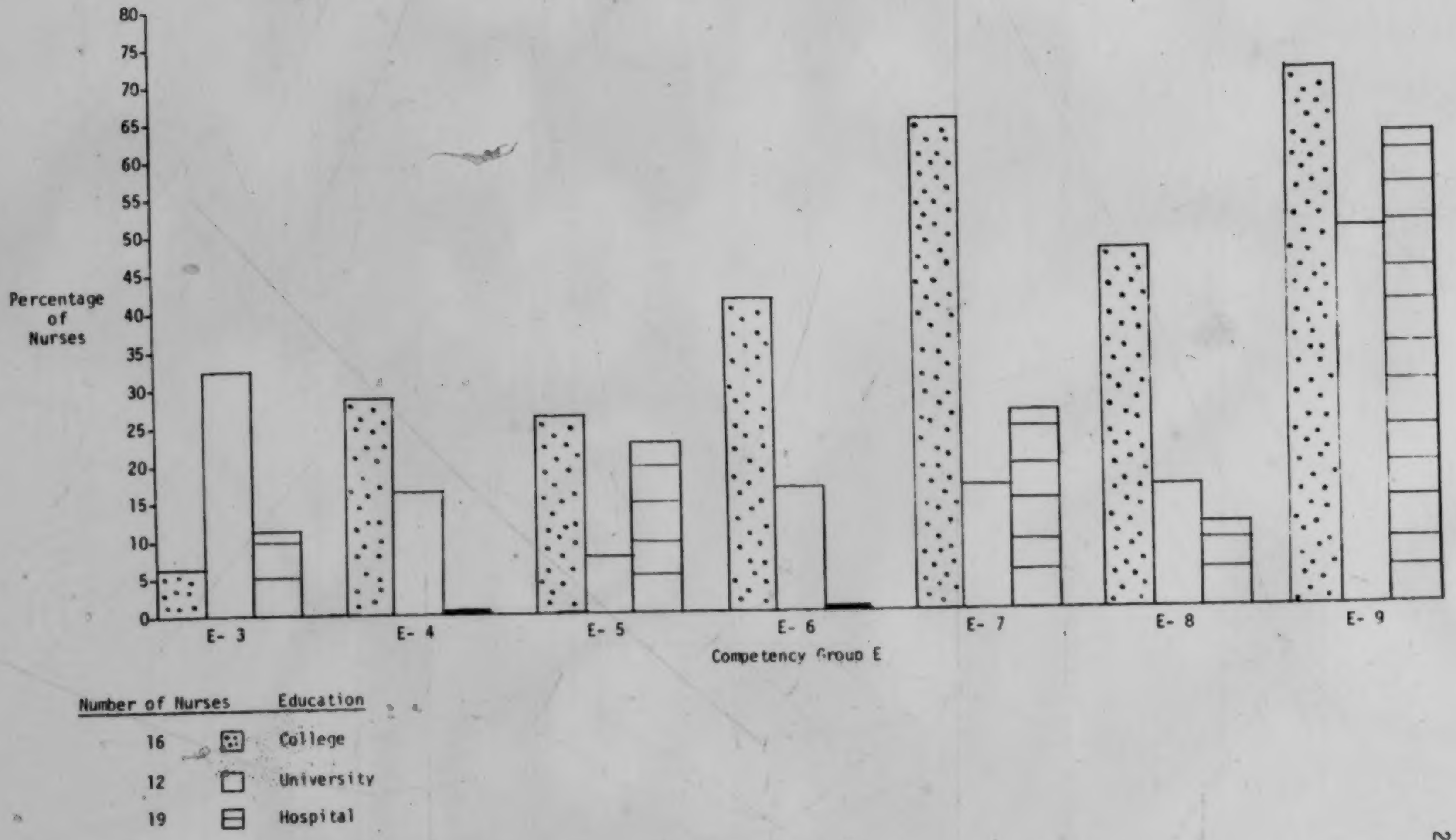


Figure 24

Percentage of College, University and Hospital Prepared Nurses With No Experience Unable to Perform Specific Skills in Competency Group F at Required Level

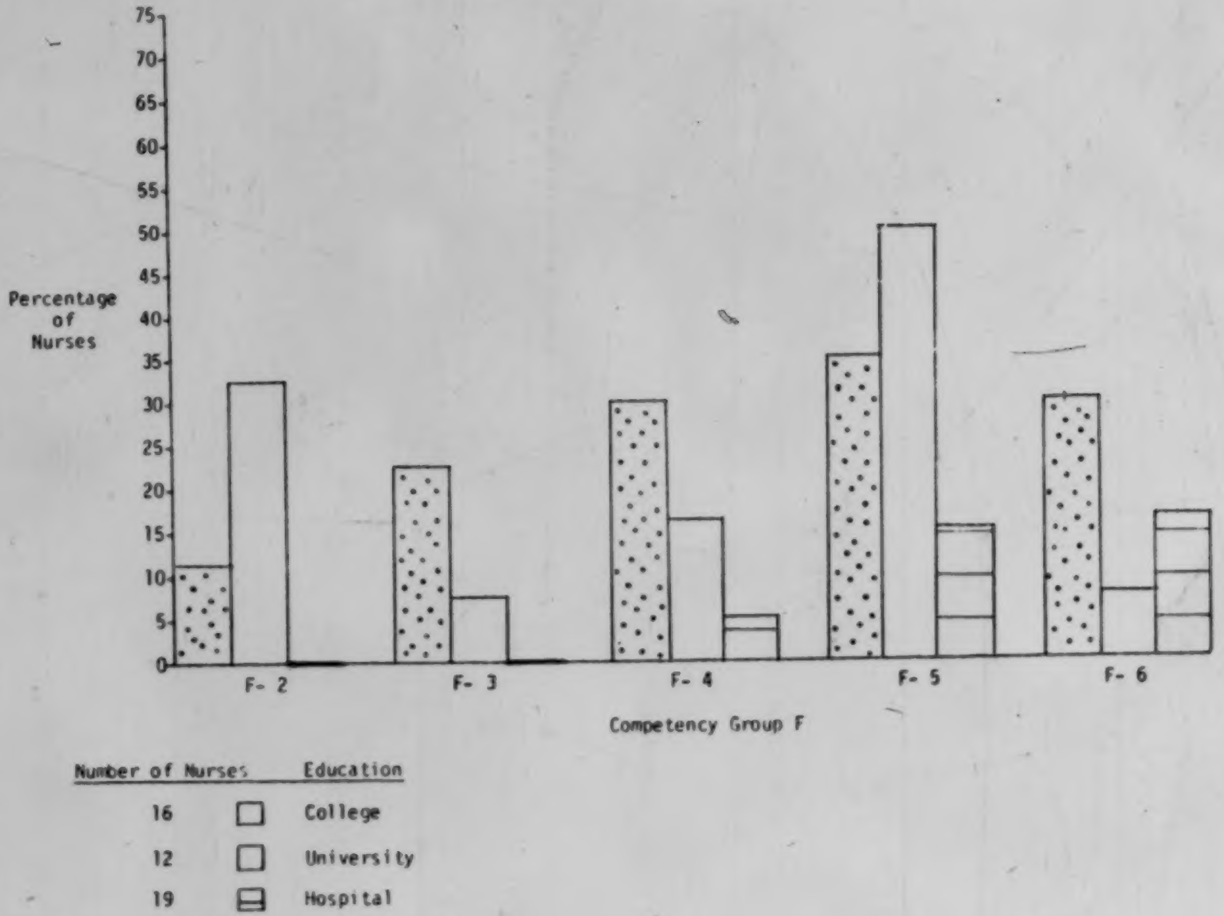


Figure 24 (continued)

Percentage of College, University and Hospital Prepared Nurses With No Experience Unable to Perform Specific Skills in Competency Group F at Required Level

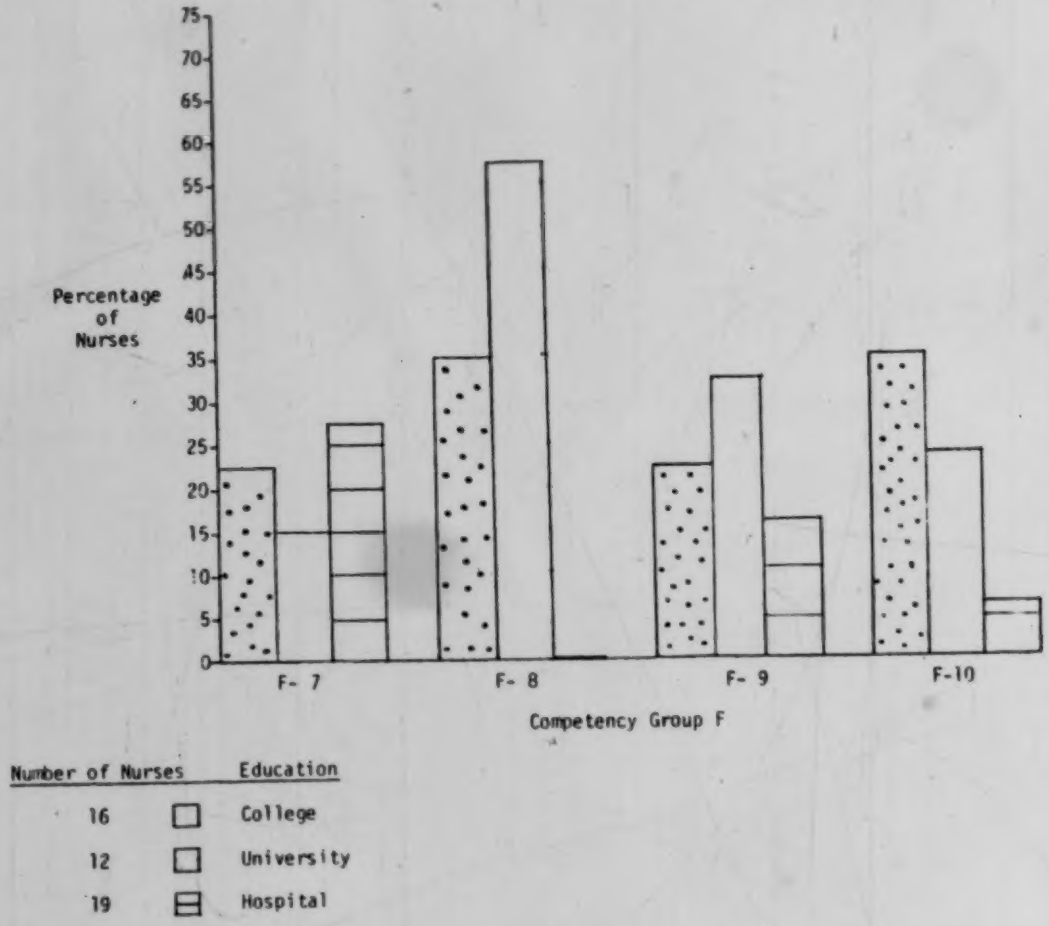


Figure 24 (continued)

Percentage of College, University and Hospital Prepared Nurses With No Experience Unable to Perform Specific Skills in Competency Group F at Required Level

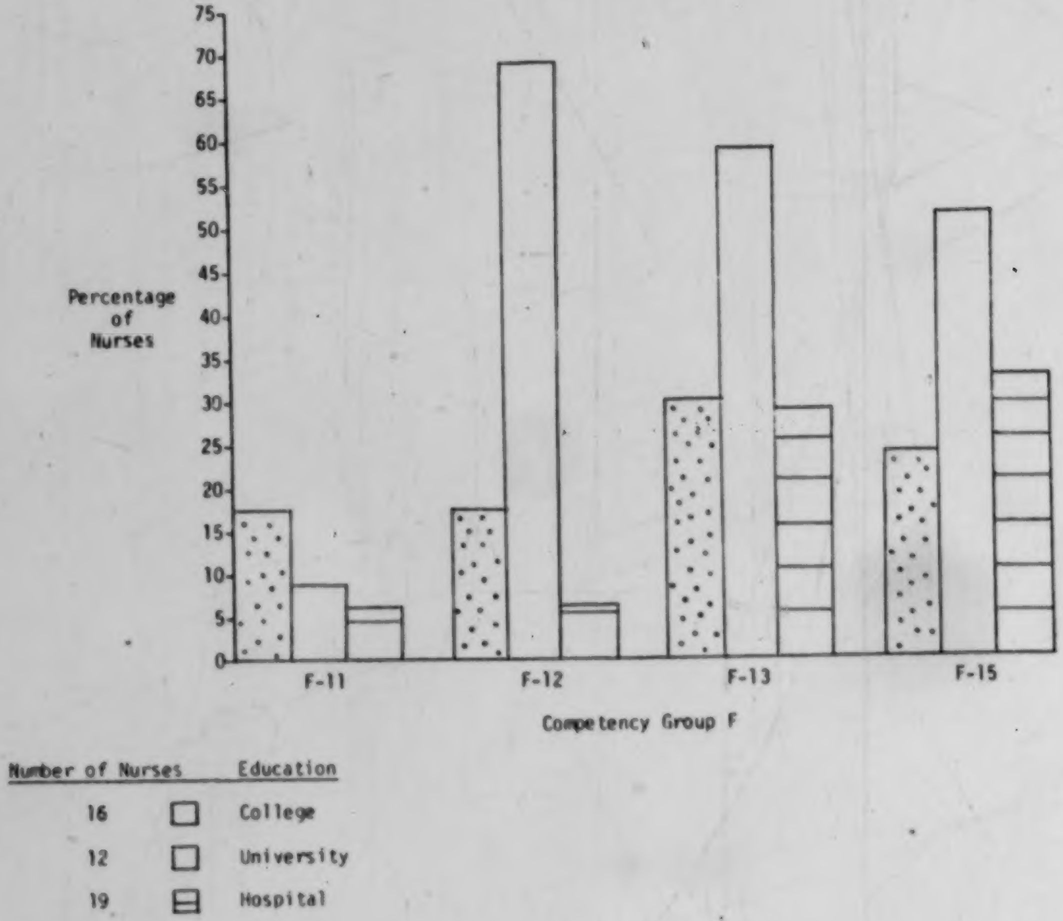


Figure 25

Percentage of College, University and Hospital Prepared Nurses
With No Experience Unable to Perform Specific Skills in
Competency Group G at Required Level

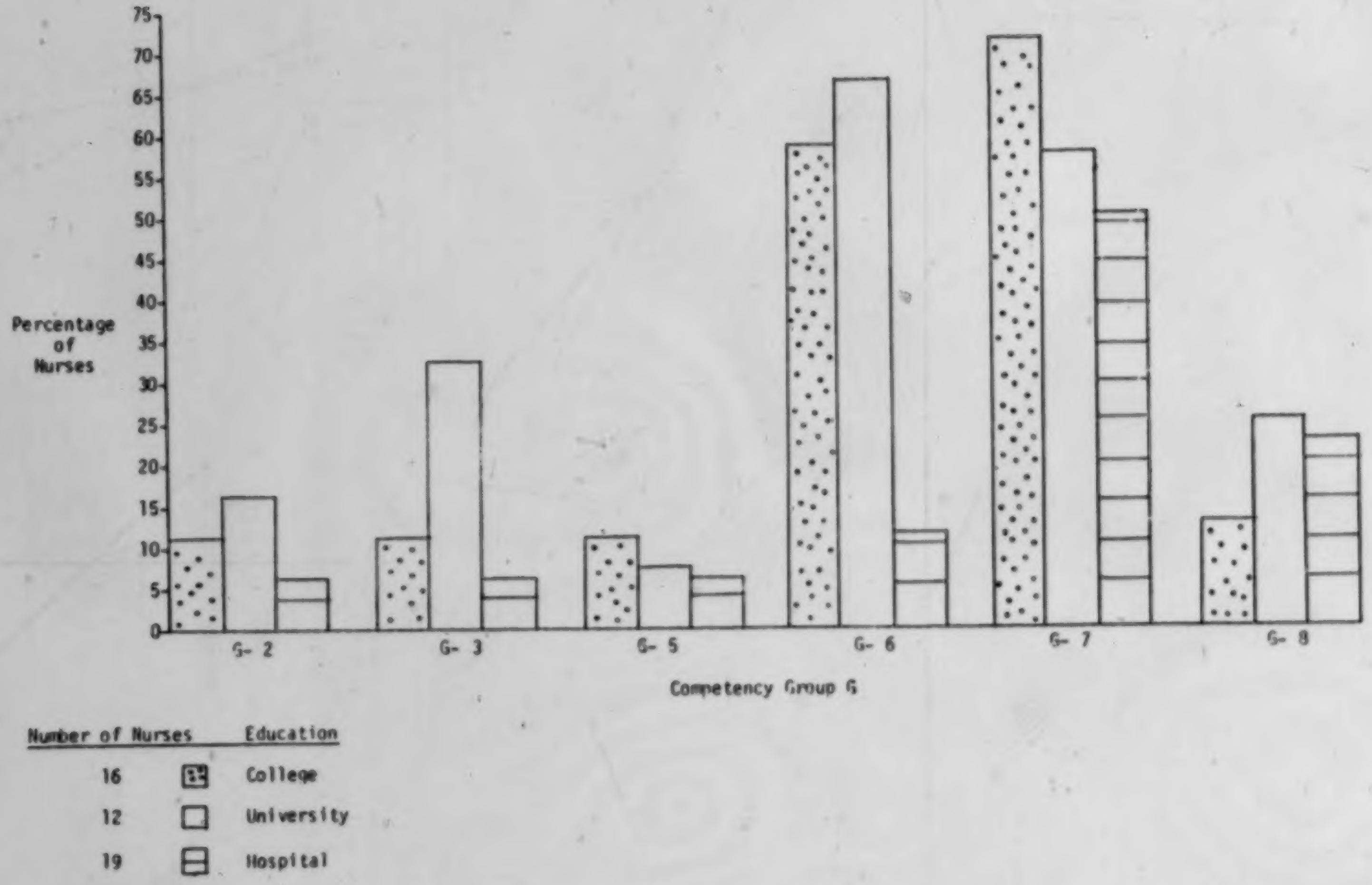


Figure 25 (continued)

Percentage of College, University and Hospital Prepared Nurses With No Experience Unable to Perform Specific Skills in Competency Group G at Required Level

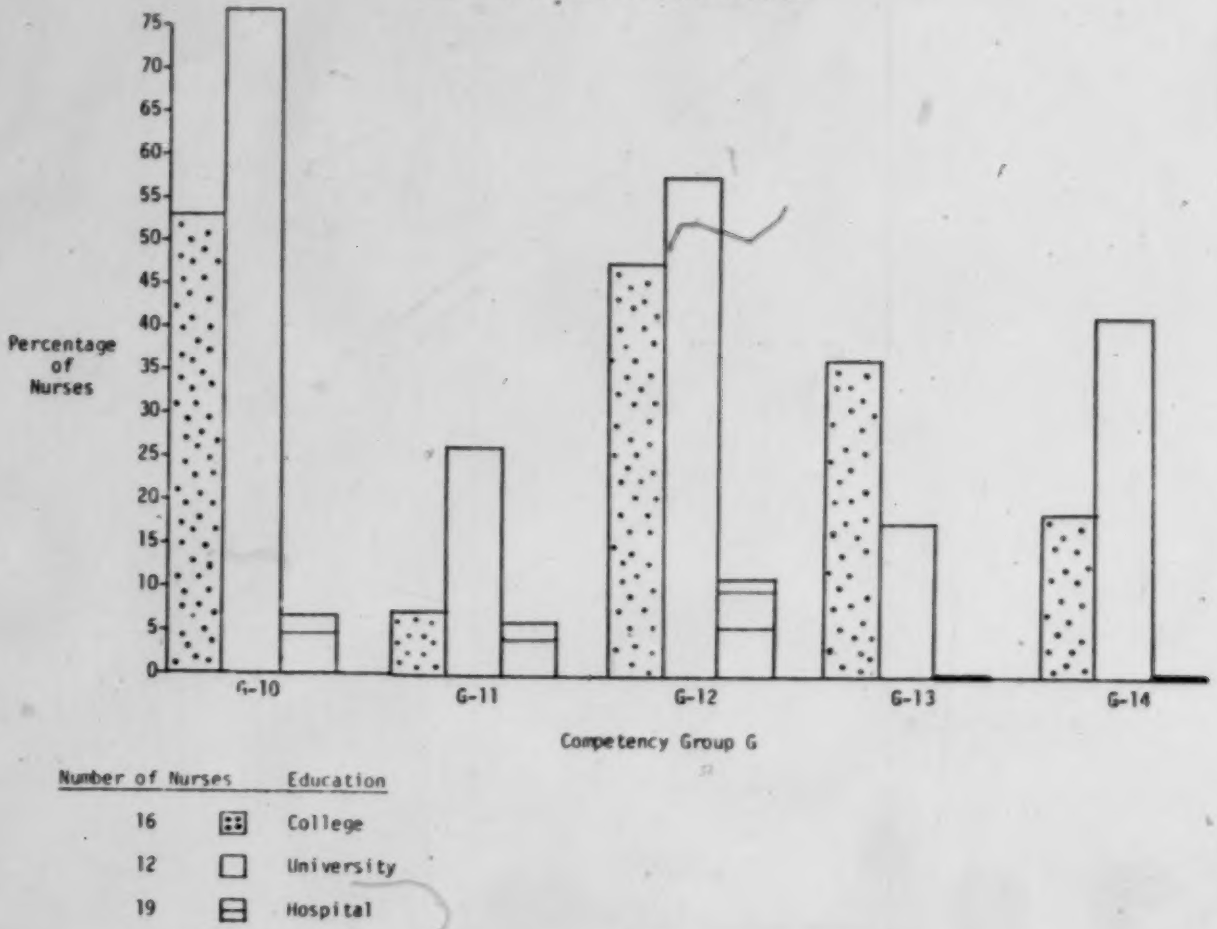


Figure 25 (continued)

Percentage of College, University and Hospital Prepared Nurses With No Experience Unable to Perform Specific Skills in Competency Group G at Required Level

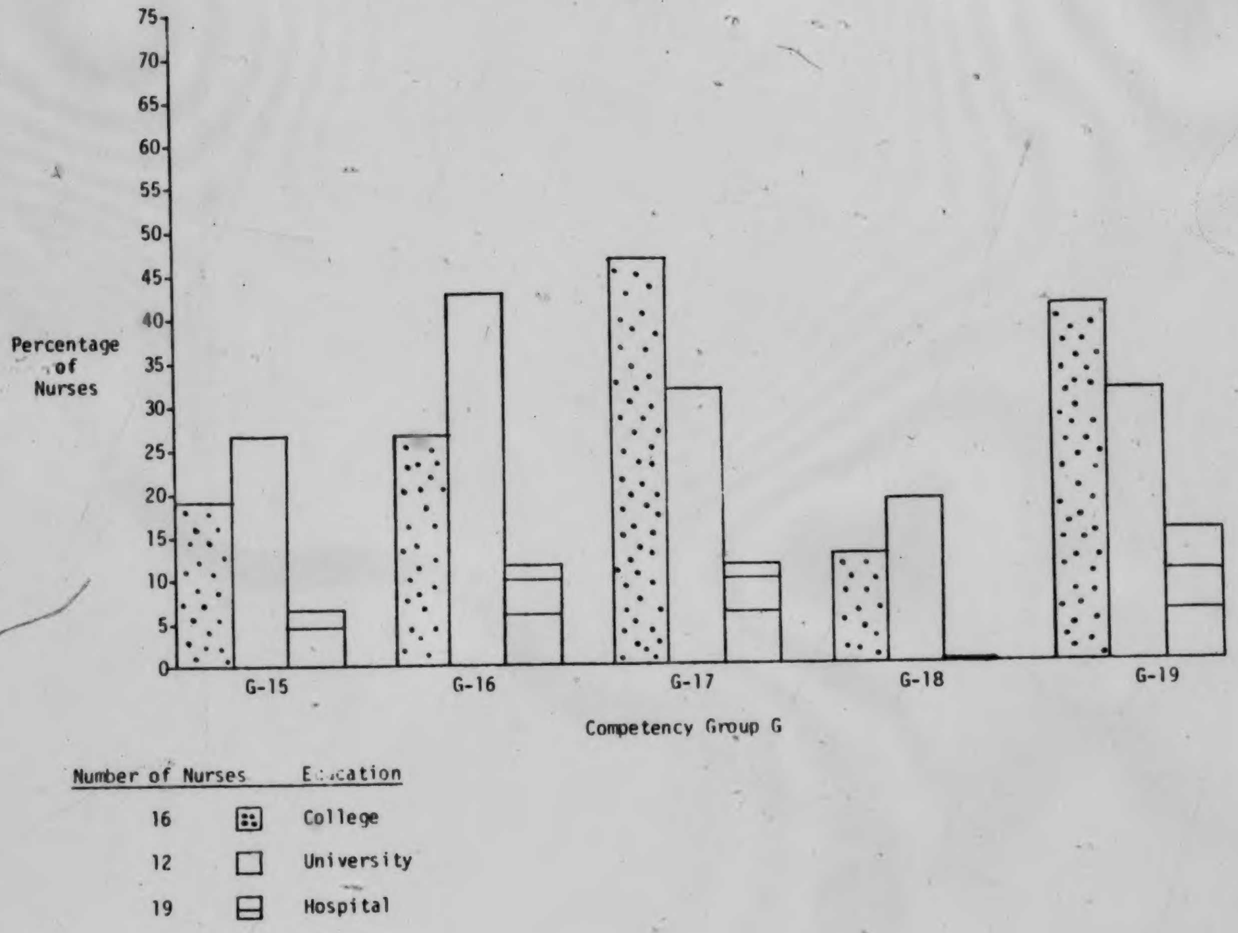


Figure 25 (continued)

Percentage of College, University and Hospital Prepared Nurses With No Experience Unable to Perform Specific Skills in Competency Group G at Required Level

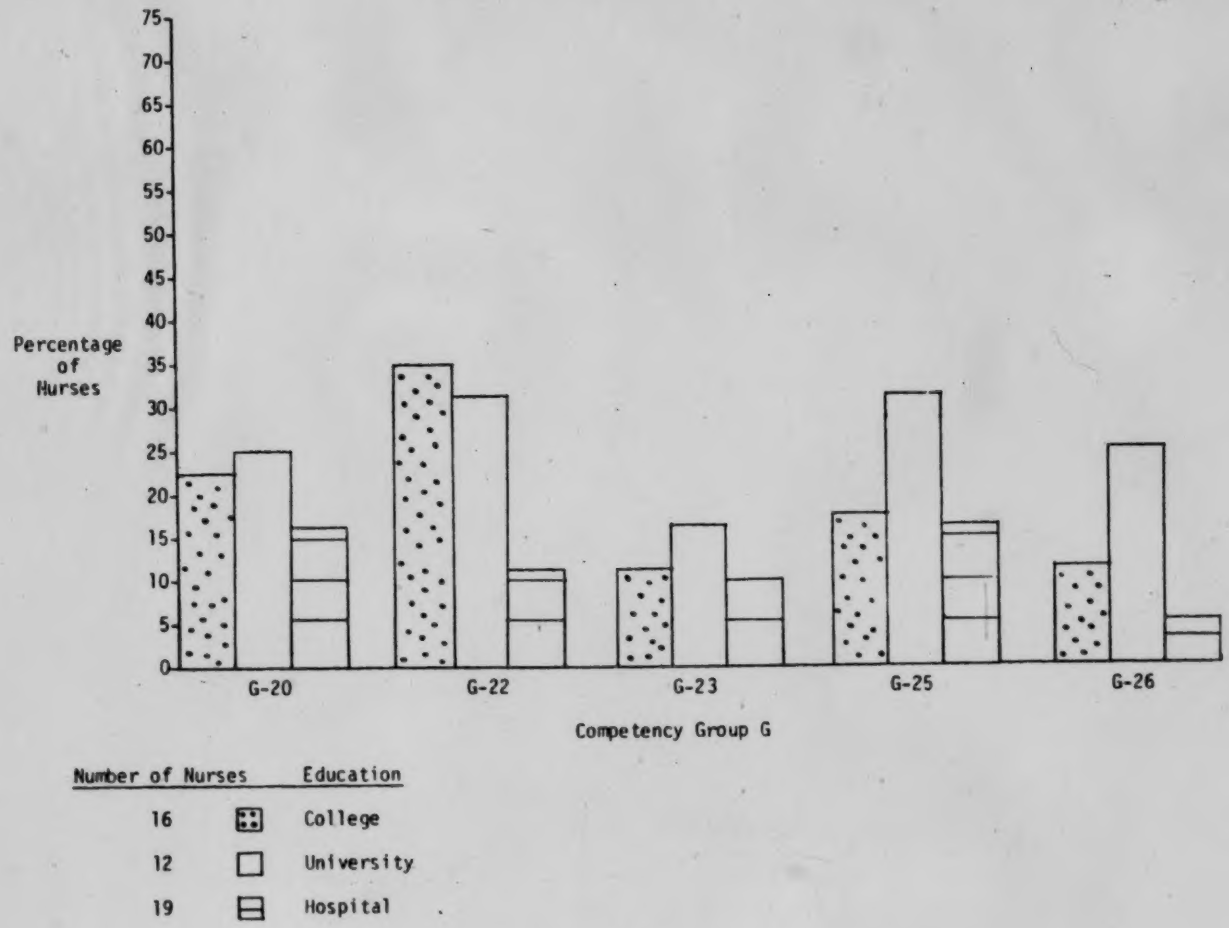


Figure 25 (continued)

Percentage of College, University and Hospital Prepared Nurses
With No Experience Unable to Perform Specific Skills in
Competency Group G at Required Level

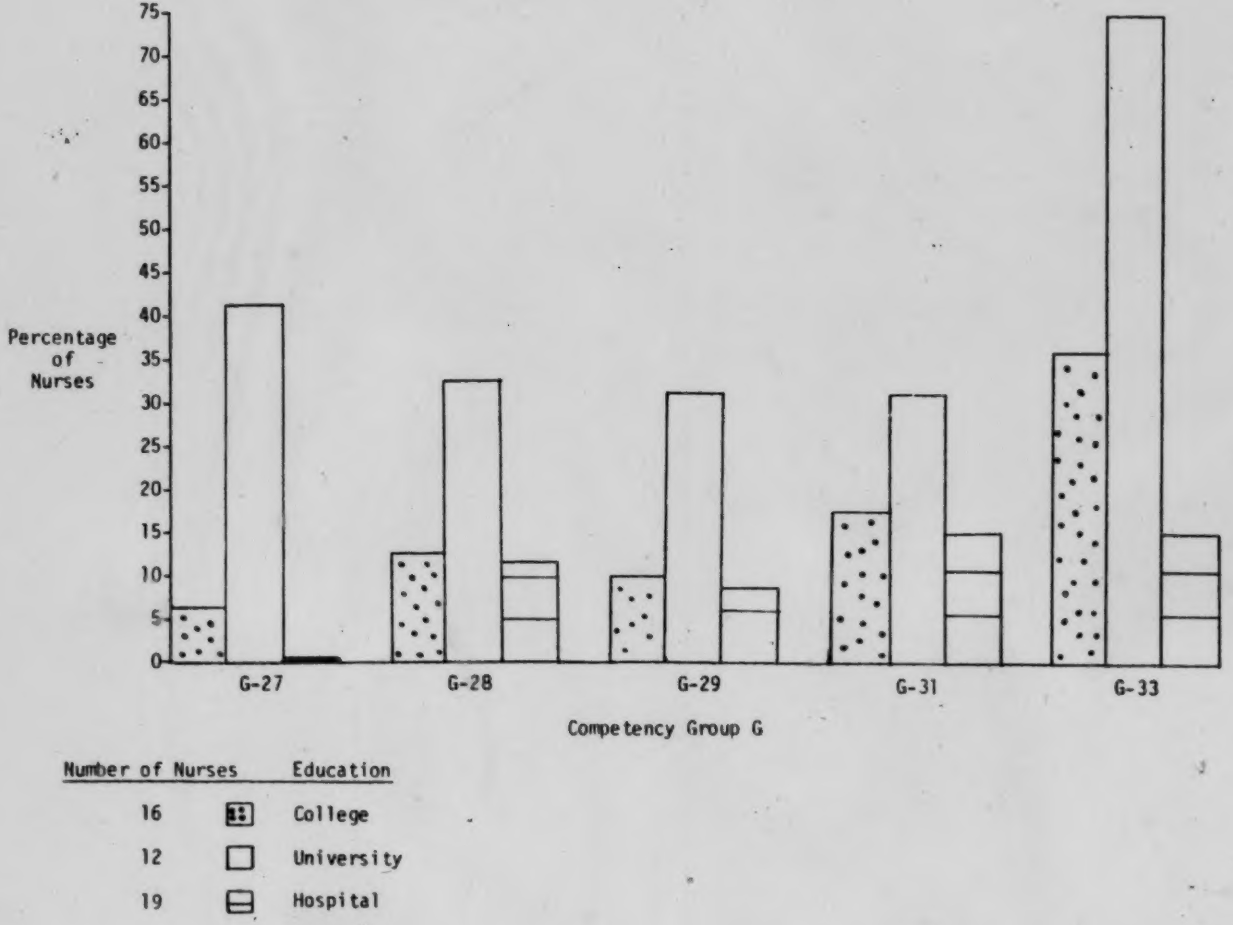


Figure 26

Percentage of College, University and Hospital Prepared Nurses With No Experience Unable to Perform Specific Skills in Competency Group H at Required Level

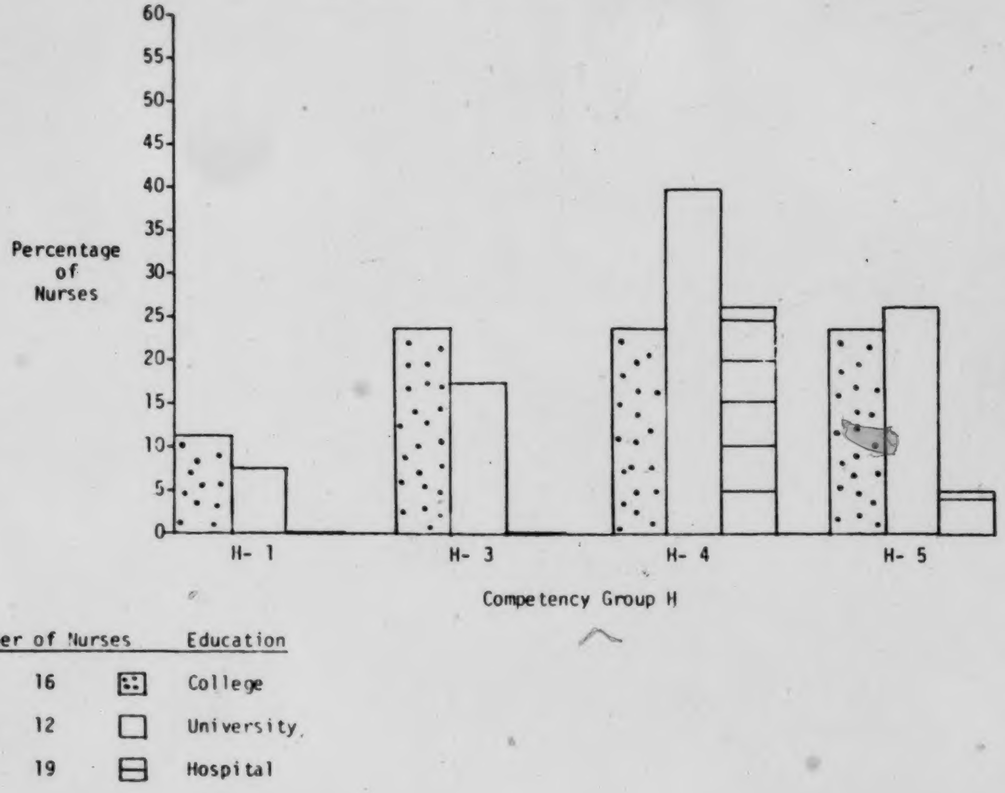


Figure 26 (continued)

Percentage of College, University and Hospital Prepared Nurses With No Experience Unable to Perform Specific Skills in Competency Group H at Required Level

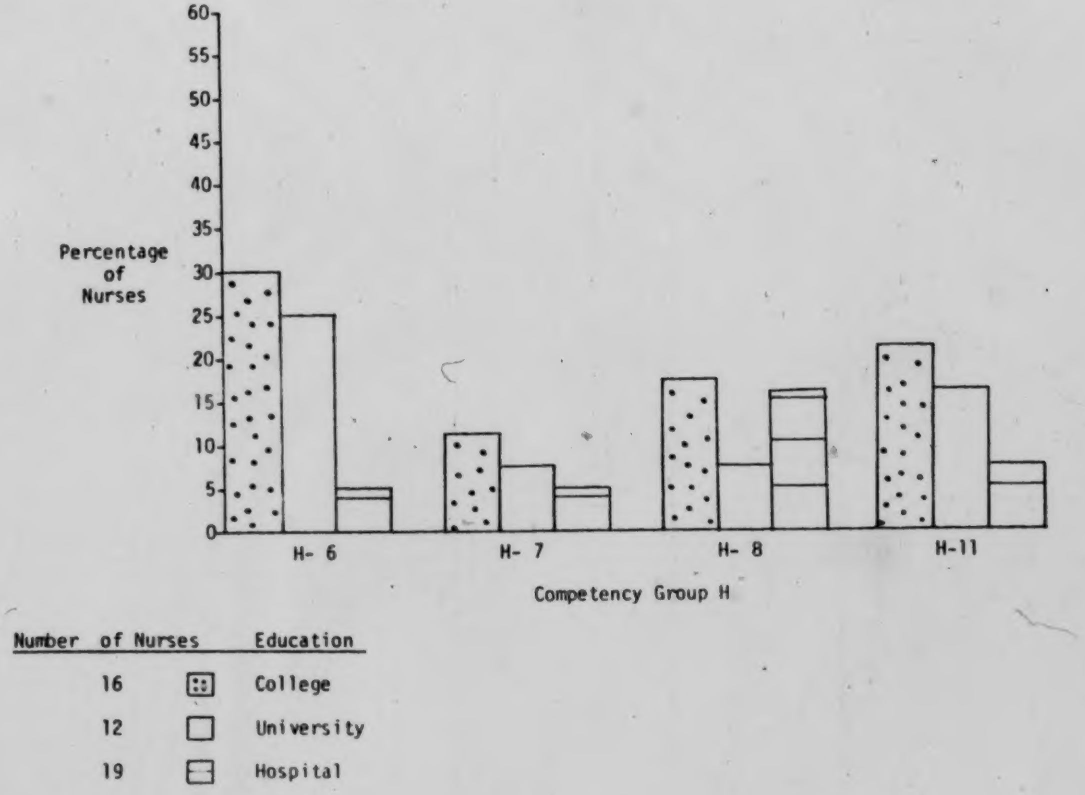


Figure 27

Percentage of College, University and Hospital Prepared Nurses With No Experience Unable to Perform Specific Skills in Competency Group I at Required Level

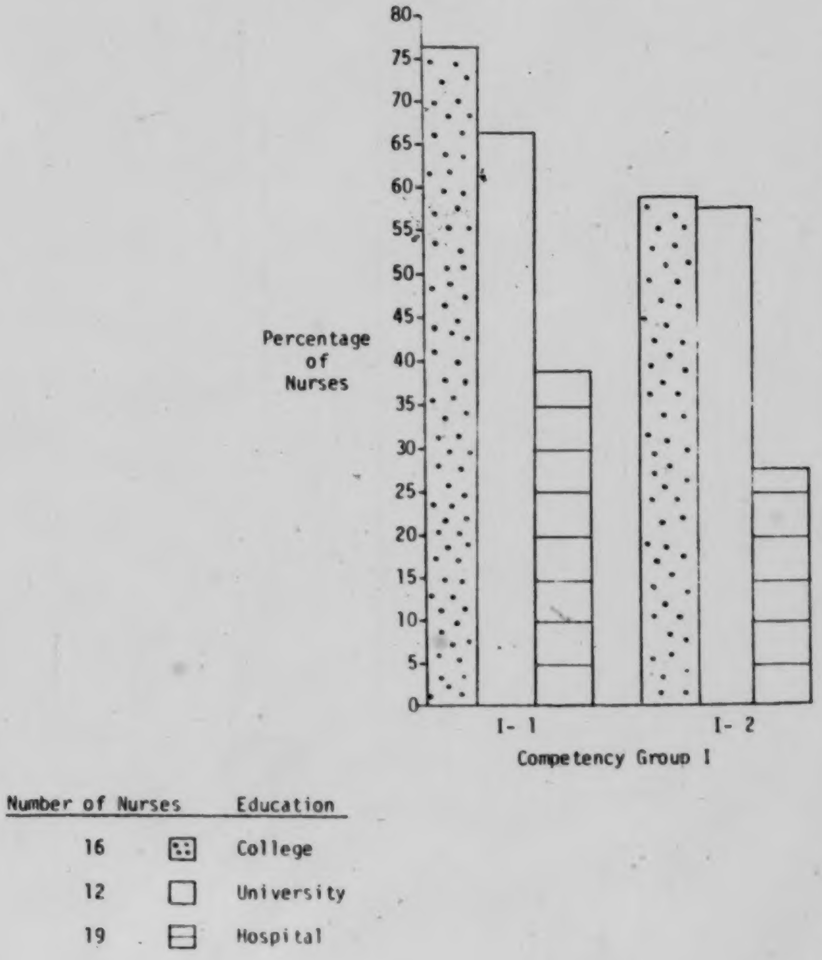
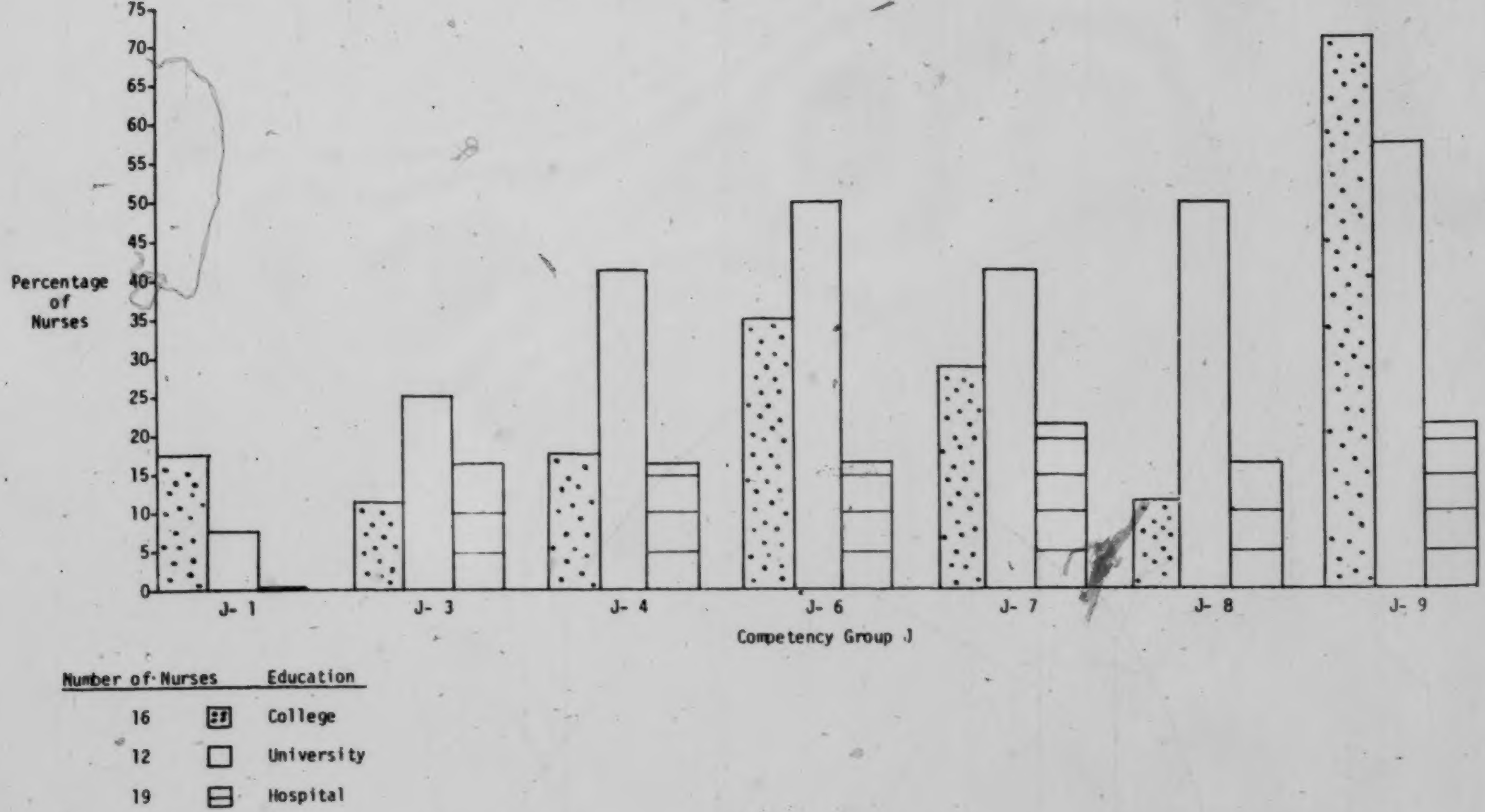


Figure 28

Percentage of College, University and Hospital Prepared Nurses
With No Experience Unable to Perform Specific Skills in
Competency Group J at Required Level